

# Status Updates

## **VTR (v5.8 / 4.12) - SPAWAR Reviews**

v5.8 vs. v5.6 (plots Jen created Brandon style)

Vicals (MODIS, VIIRS, GOCI)

Matchups @ MOBY, WAVCIS (MODIS, VIIRS) – Jen comparisons for Bob

Matchups @ IEODO (GOCI) w/ MODIS and VIIRS – How Many?

Image Comparisons (VIIRS, MODIS, GOCI)

Matchups (VIIRS, MODIS) – NOAA CalVal, GeoCape and Ocean Color Cruises

Highres VIIRS (Ryan's Paper)

Sensor Merge Example

NASA 2014 Updates (List)

Changes from v5.4 to v5.8 (aops v4.10 to v4.12) – List

VIIRS overlap fixes using flags for Daily/Composites (ATMWARN, HISATZEN, ETC.)

LMI Fixes (Coefficient Changes)

VIIRS SDR Calibration Changes LUT and c0 quadratic eq. ...

Anything Missing?

## **ToDo:**

HighRes VIIRS v5.8

Sensor Merge Capability – Lyon's Script / Code Implementation (MODIS,VIIRS,GOCI)

v5.8

VTR MissBight TODS VIIRS processing (v5.8)

Process NOAA CalVal Cruise Data (ASD, Flowthru – bb,a,c,ag,temp,sal,fluor, Hyperpro)

Next NOAA Cal/Val Telecon/Presentation – Jen's Comparisons (MSL12,NASA L2gen,NRL APS)

NexSat VIIRS NRT for Monterey/J PSS program (chlor, SST, IOP's)

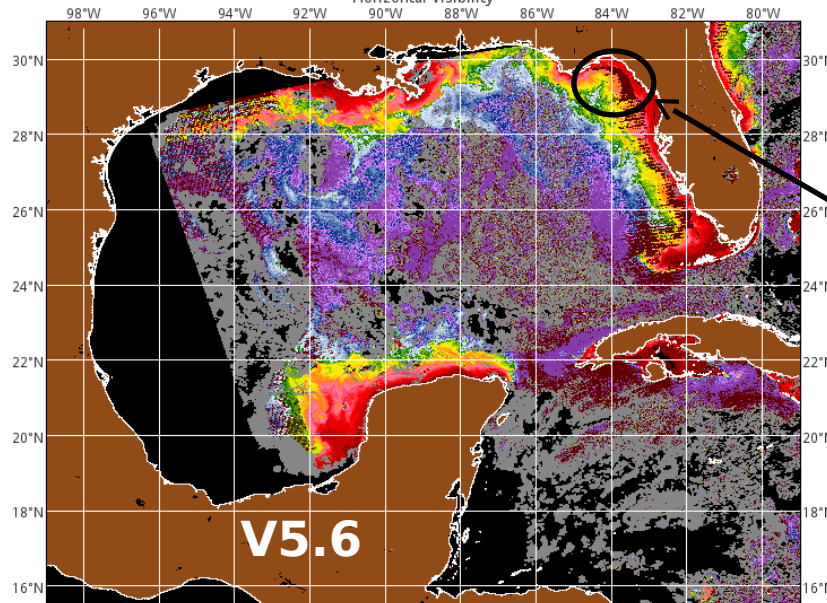
**Note:** MOBY mooring swap out (deployment m257) January 13-15, 2015. Expect a 2

# MODIS 11/30/14 LMI **NRL Default** Horizontal Visibility

aqua.2014334.1130.185000.L3\_Gomex.v5.6.hdf

Horizontal Visibility

Sun Nov 30 18:50:09 2014

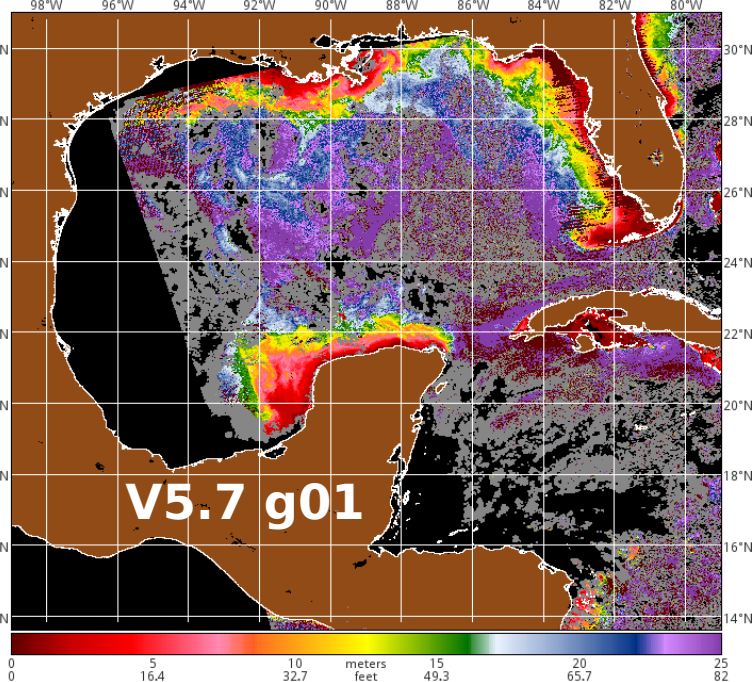


Solid Maroon Values  
are LMI Failures

aqua.2014334.1130.185000.L3\_Gomex.v5.7.3.hdf

Horizontal Visibility

Sun Nov 30 18:50:09 2014



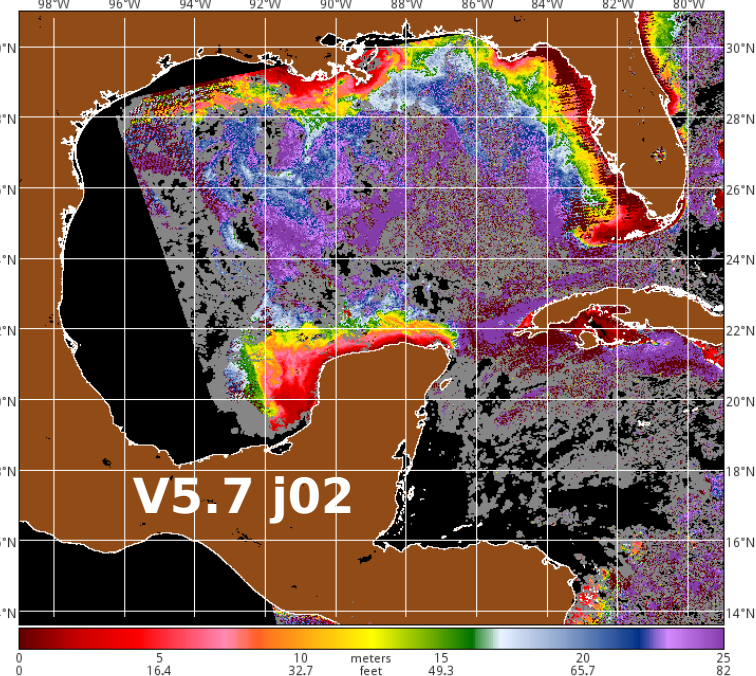
10 meters 15  
32.7 feet 49.3

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Naval Research Laboratory  
Stennis Space Center, MS

aqua.2014334.1130.185000.L3\_Gomex.v5.7.3.j02.hdf

Horizontal Visibility

Sun Nov 30 18:50:09 2014



CLDICE LAND ATMFAIL

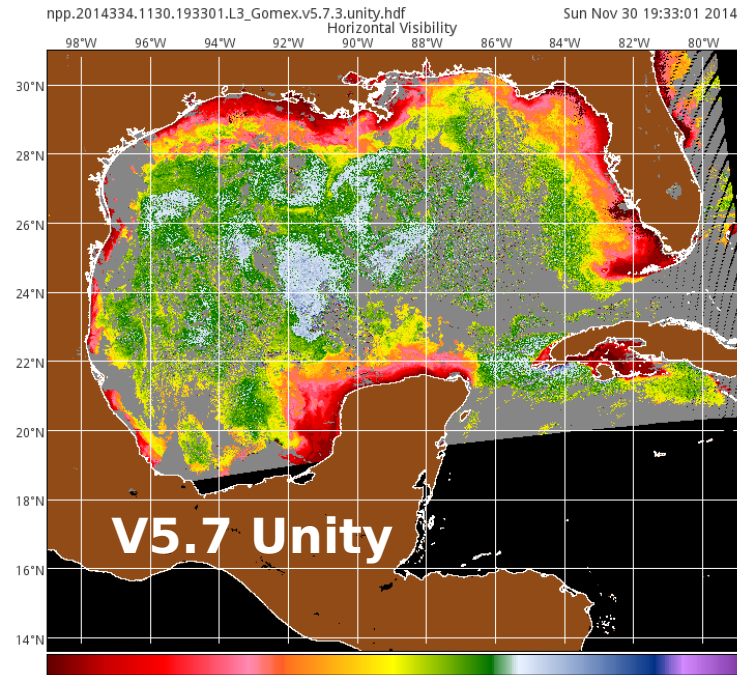
horiz\_vis (provisional)  
Gulf of Mexico (MODISA-AQUA-PM)  
Version 13 (APS v5.7.3)

Code 7330/Ocean Sciences  
Naval Research Laboratory  
Stennis Space Center, MS

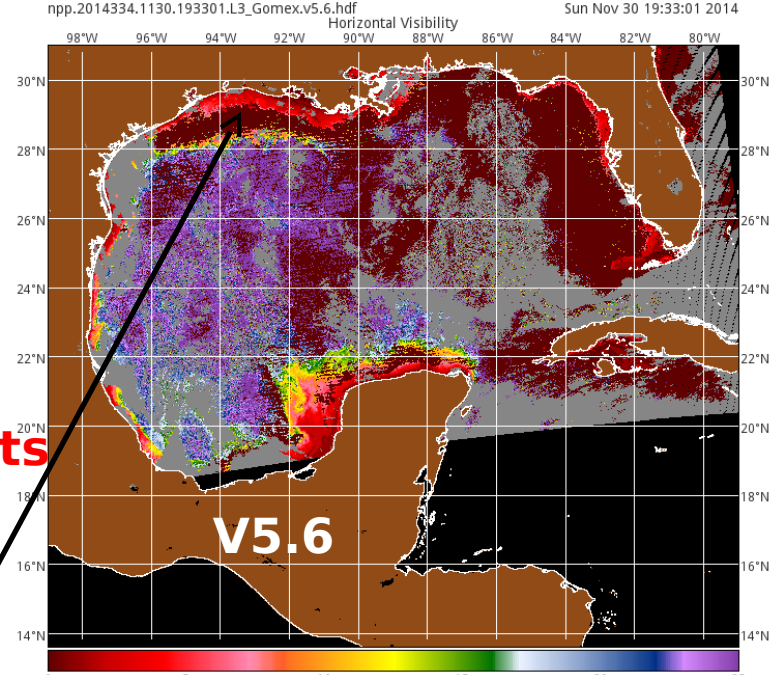
CLDICE LAND ATMFAIL

horiz\_vis (provisional)  
Gulf of Mexico (MODISA-AQUA-PM)  
Version 13 (APS v5.7.3)

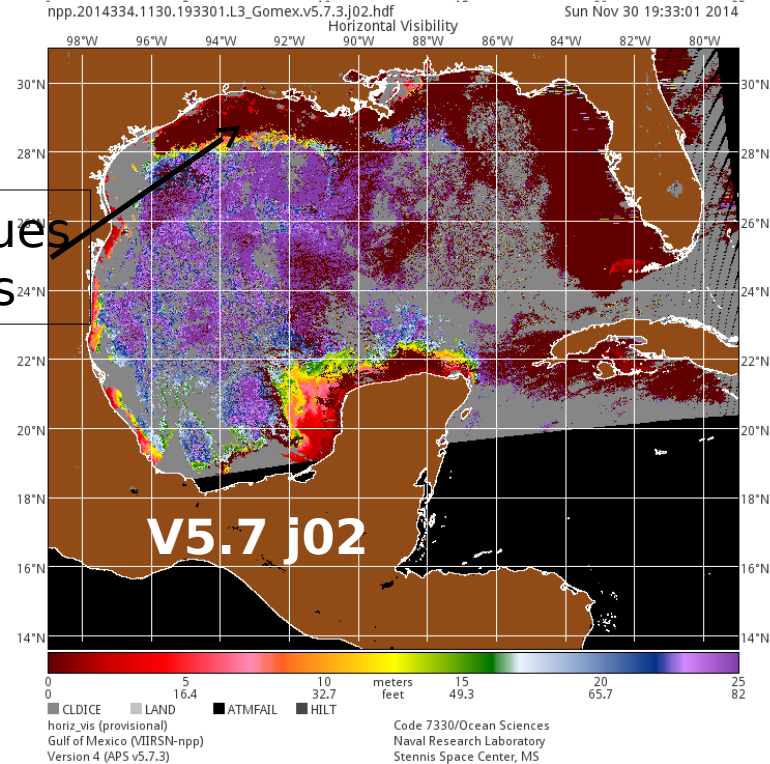
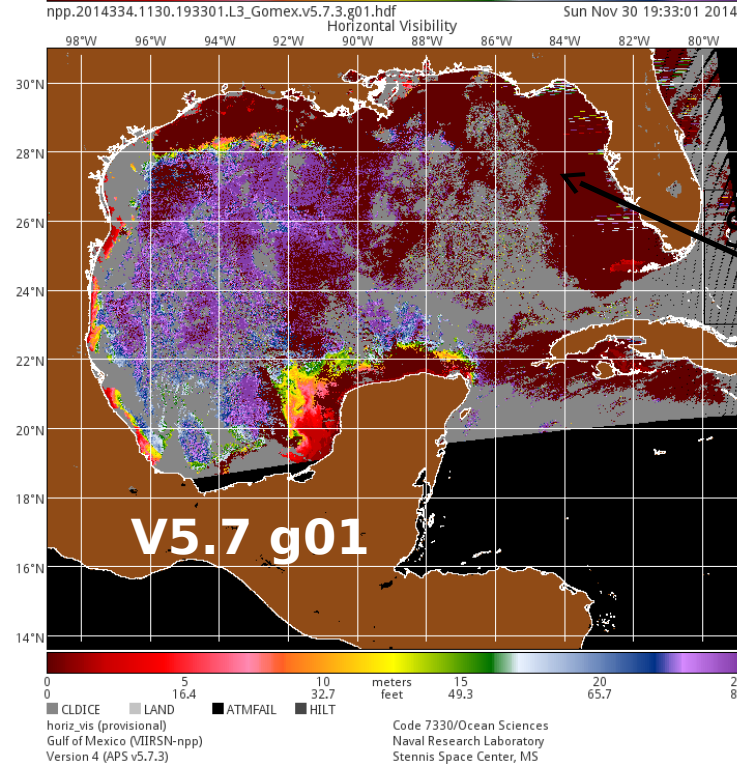
Code 7330/Ocean Sciences  
Naval Research Laboratory  
Stennis Space Center, MS



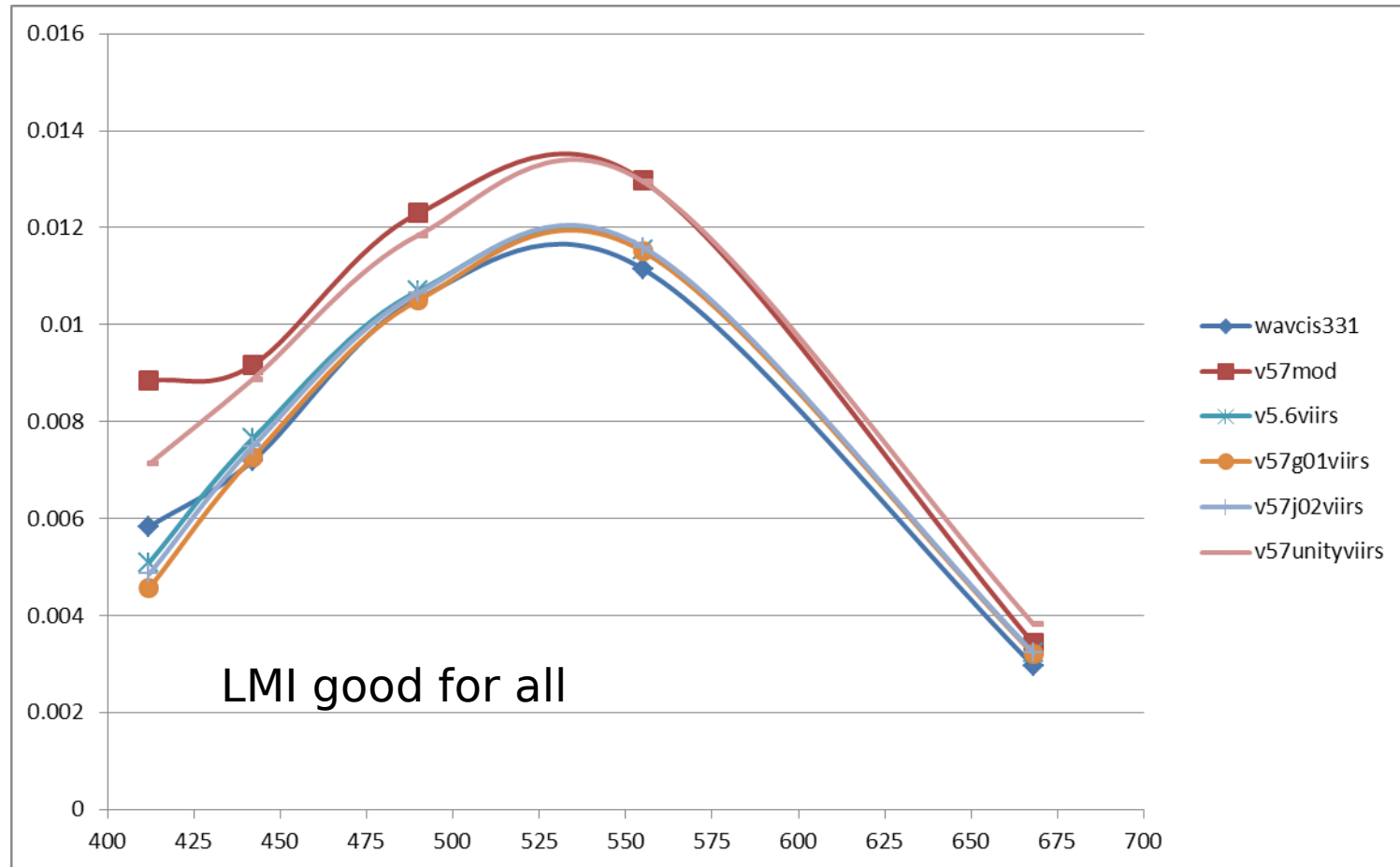
**VIIRS  
11/30/14  
LMI NRL Defaults  
Horizontal  
Visibility**



**Solid Maroon Values  
are LMI Failures**

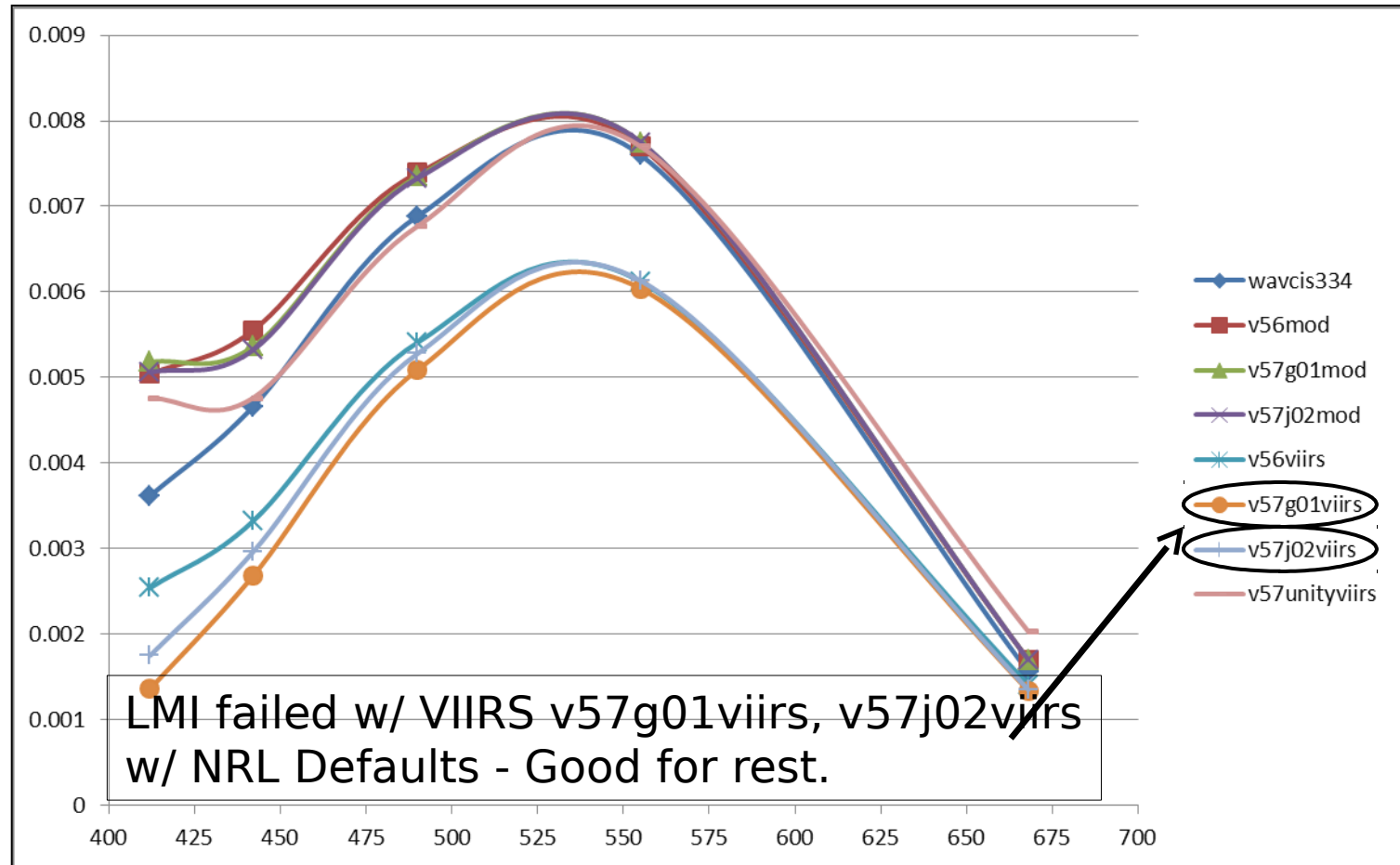


JDAY 331 11/27/14





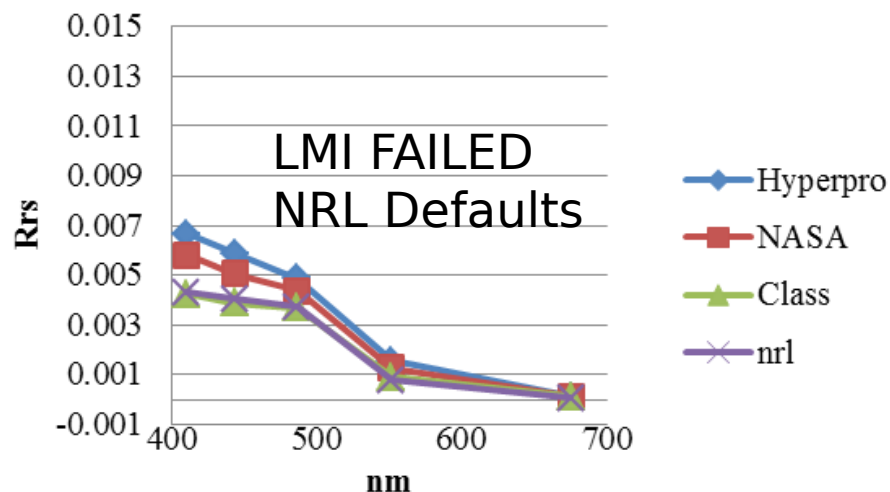
JDAY 334 11/30/14



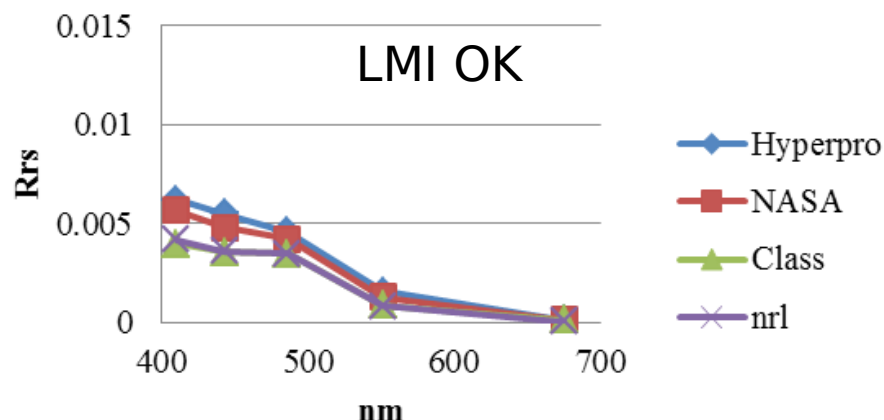
NOTE: LMI very sensitive to subtle changes in Rrs spectral shape!

# NOAA East Coast Cal/Val Cruise - November 2014

**Sta. 2, 11/12, Chl 0.24 mg/m<sup>3</sup>**



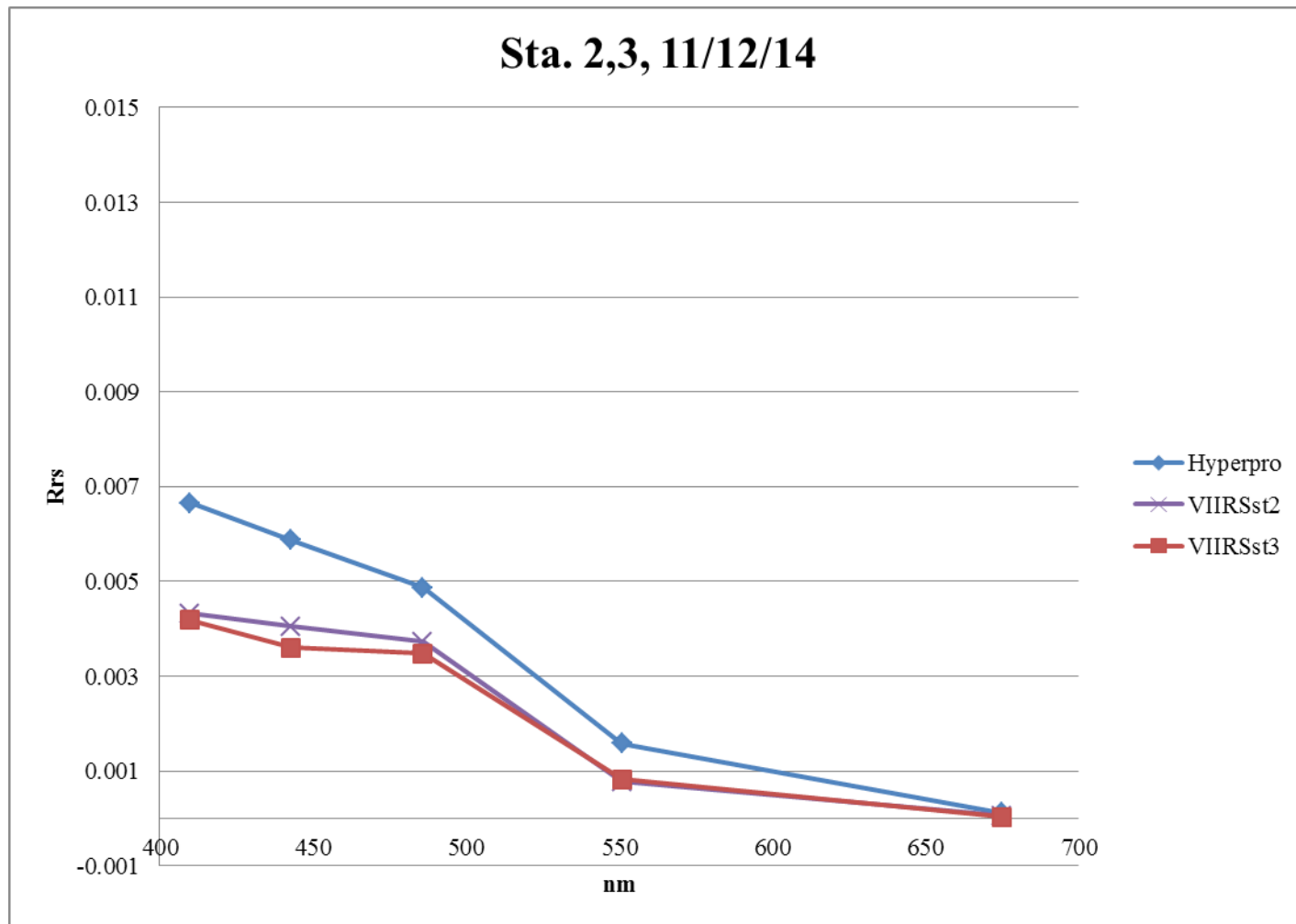
**Sta. 3, 11/12, Chl 0.23 mg/m<sup>3</sup>**



st#,date,jday,lat,lon,rrs410,rrs443,rrs486,rrs551,rrs671,chlor,horiz\_vis,vert\_vis  
 st02,20141112,316,32.0816,-  
 78.4205,478,1056,0.00432,0.00405,0.00373,0.00077,0.00005,0.18659,invalid,invalid  
 st03,20141112,316,31.8836,-  
 78.1387,515,1082,0.00418,0.00360,0.00348,0.00082,0.00003,0.20921,34.00000,22.00000  
 st17,20141118,322,33.5421,-  
 78.4662,472,861,0.00151,0.00218,0.00337,0.00449,0.00131,3.57452,5.00000,4.00000  
 st18,20141118,322,33.4215,-  
 78.4903,469,877,0.00188,0.00229,0.00357,0.00387,0.00080,2.04891,7.00000,5.00000  
 st19,20141118,322,33.3302,-  
 78.4352,476,890,0.00213,0.00323,0.00473,0.00268,0.00031,0.50441,invalid,invalid  
 st20,20141119,323,31.9948,-  
 80.0713,258,1068,invalid,invalid,invalid,invalid,invalid,invalid,invalid,invalid  
 st21,20141119,323,32.2003,-

NOTE: RRS Spectra for NRL Similar for both stations but LMI failed station 2.

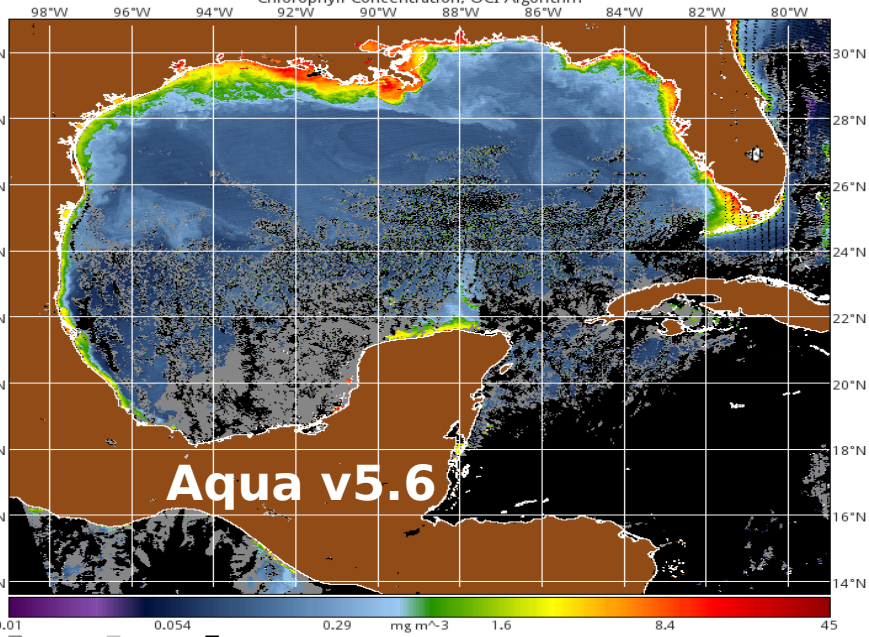
# NOAA East Coast Cal/Val Cruise - November 2014



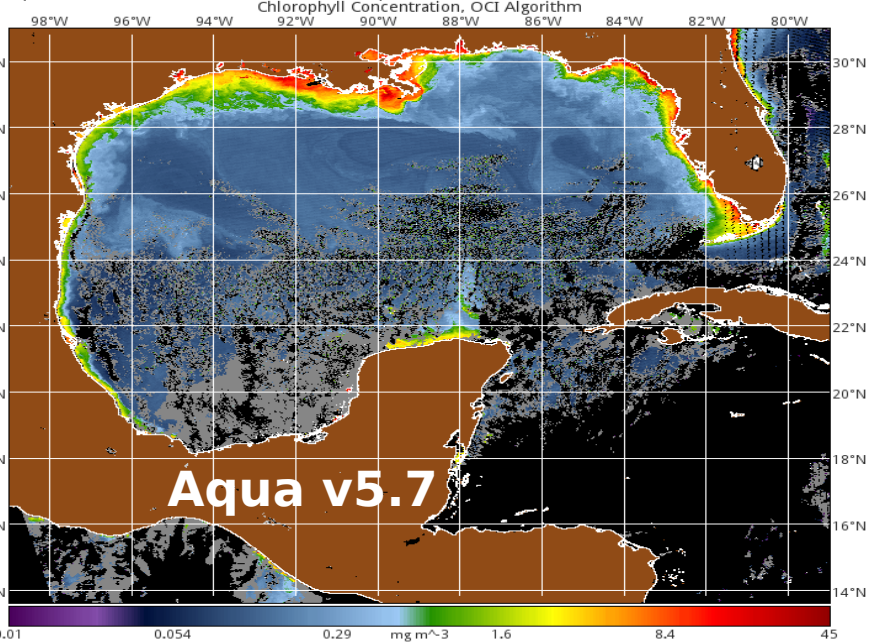
NOTE: RRS Spectra for both stations (2,3) but LMI failed (NRL Defaults) sta

NOTE: LMI very sensitive to subtle changes in Rrs spectral shape!

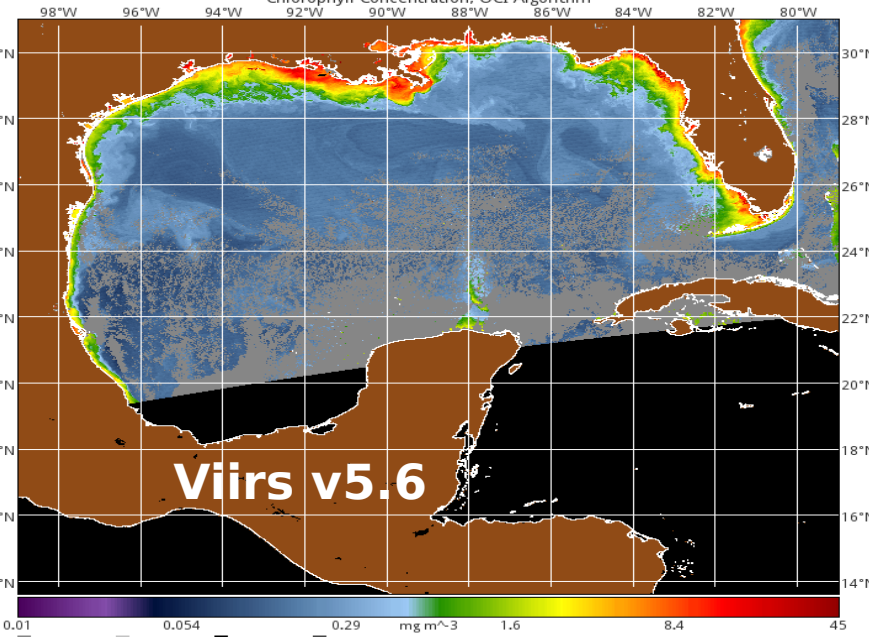
aqua.2014298.1025.191500.L3\_Gomex.v5.6.qaa.hdf Chlorophyll Concentration, OCI Algorithm Sat Oct 25 19:15:08 2014



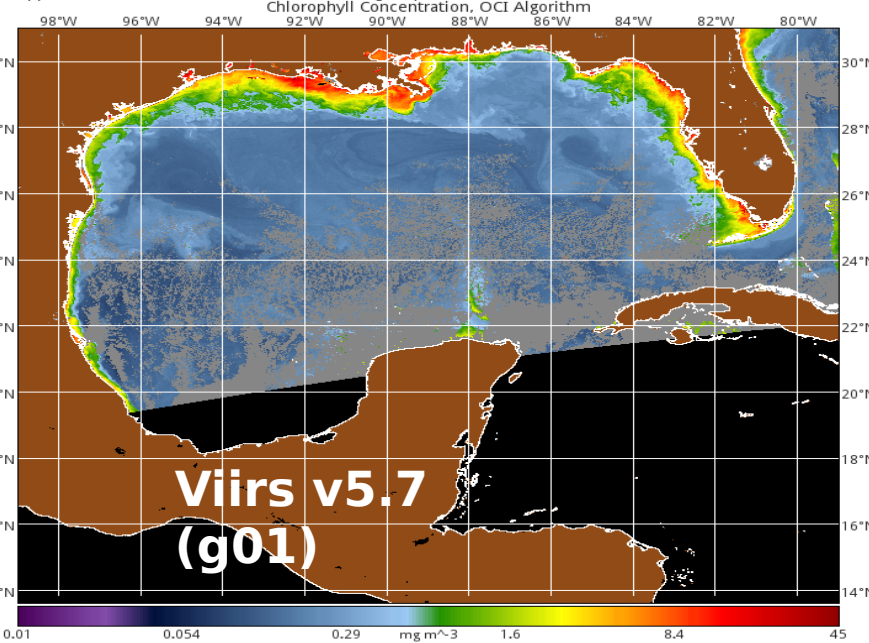
aqua.2014298.1025.191500.L3\_Gomex.v5.7.3.qaa.hdf Chlorophyll Concentration, OCI Algorithm Sat Oct 25 19:15:08 2014



npp.2014298.1025.190806.L3\_Gomex.v5.6.qaa.hdf Chlorophyll Concentration, OCI Algorithm Sat Oct 25 19:08:41 2014

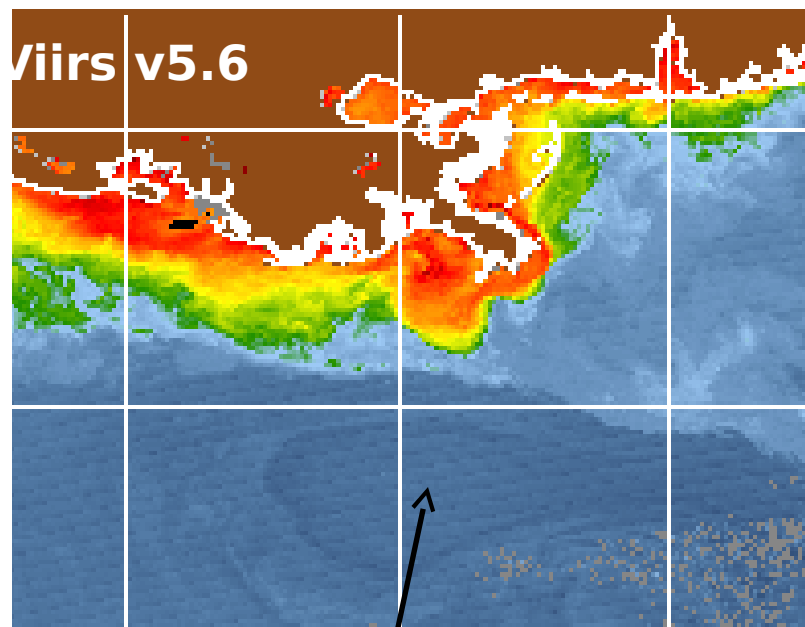
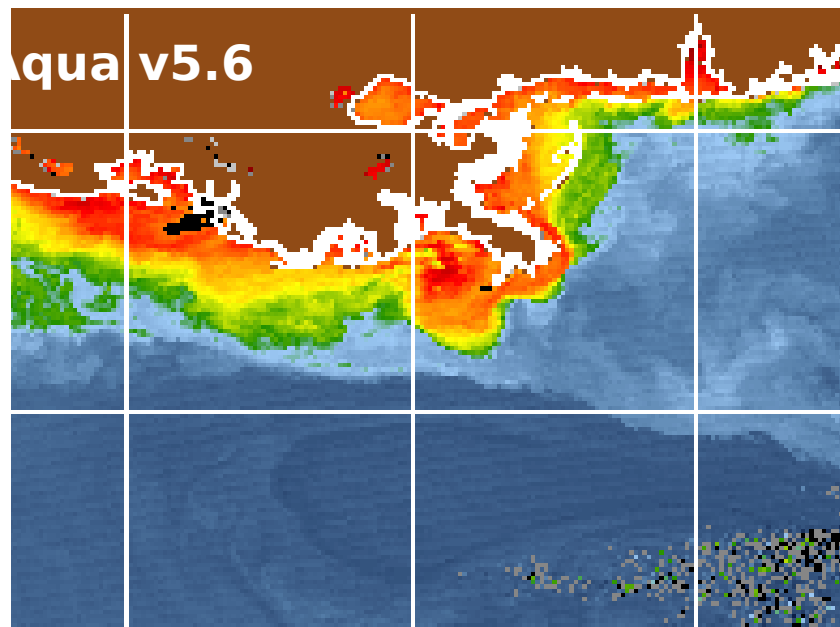


npp.2014298.1025.190806.L3\_Gomex.v5.7.4.g01.qaa.hdf Chlorophyll Concentration, OCI Algorithm Sat Oct 25 19:08:41 2014

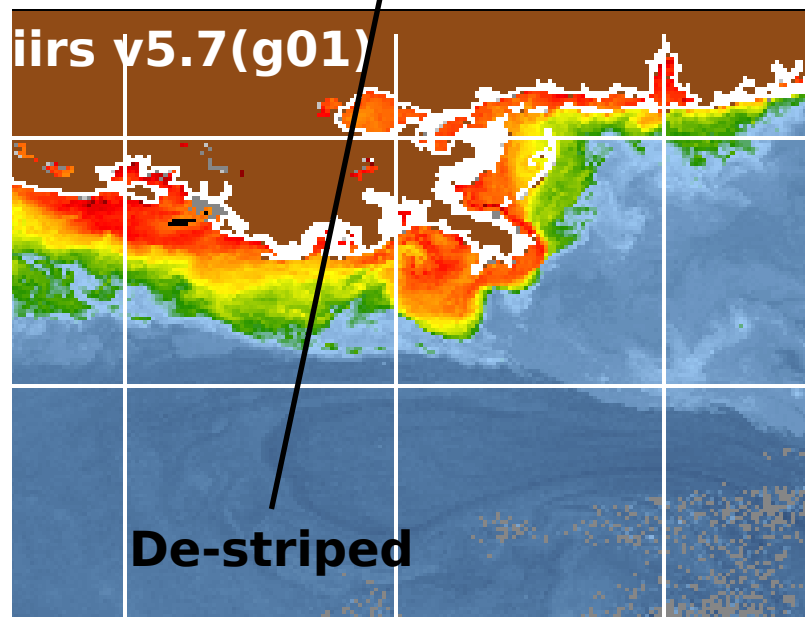
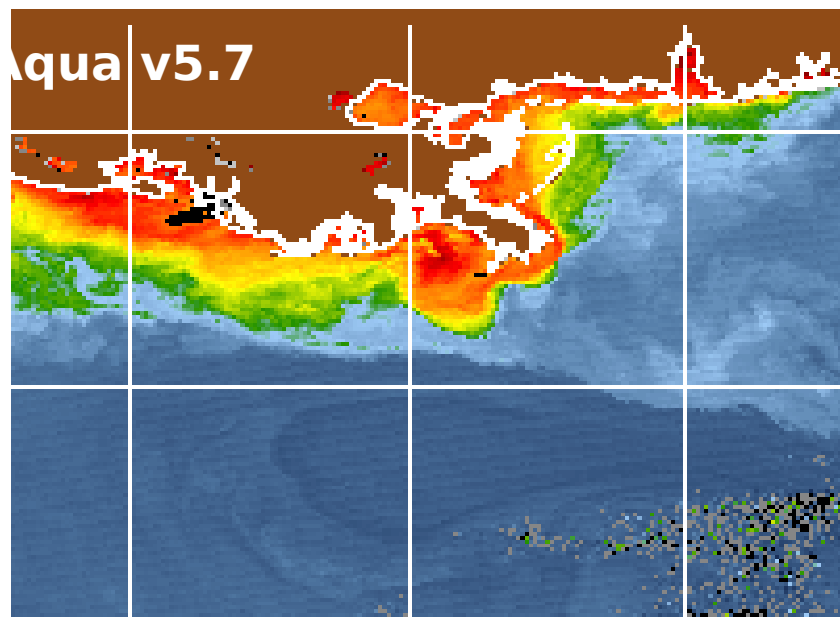


**C  
H  
L  
O  
R**

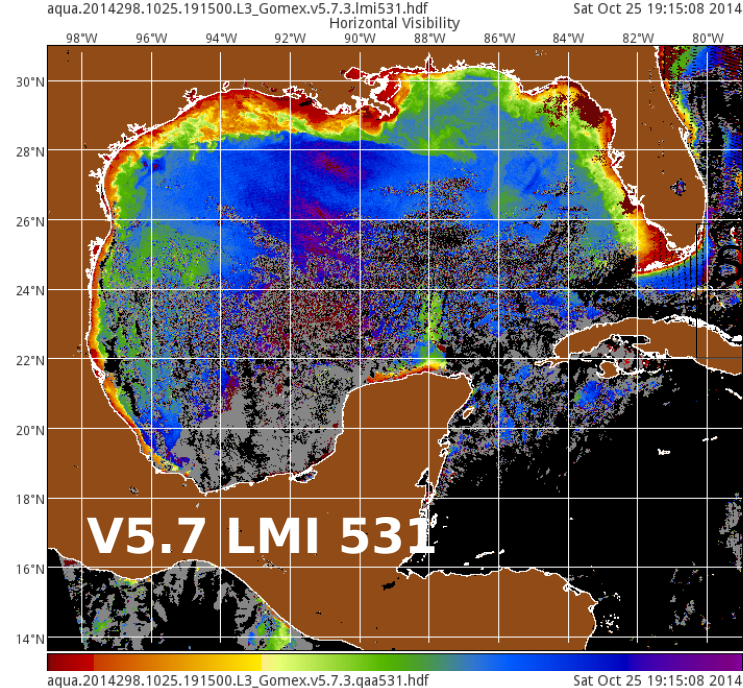




Chlor\_a

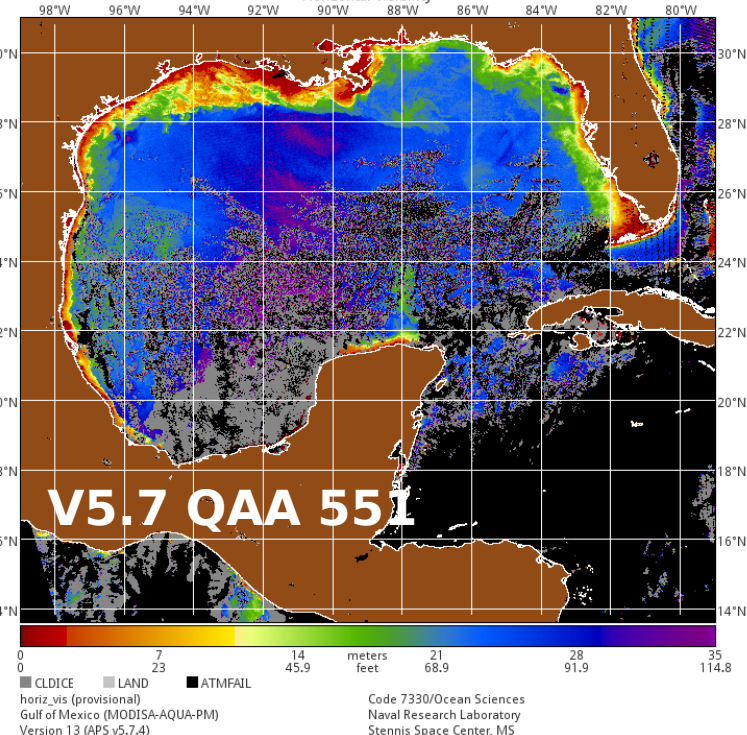
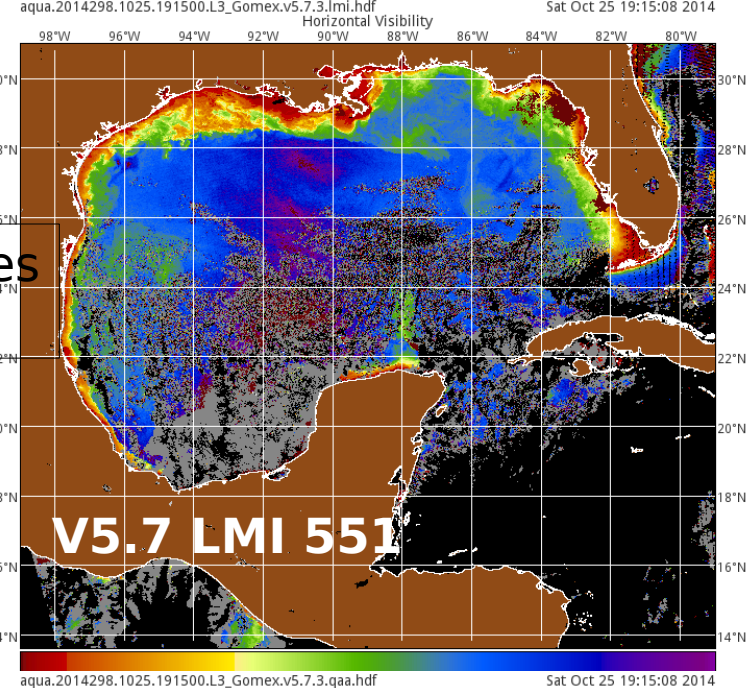
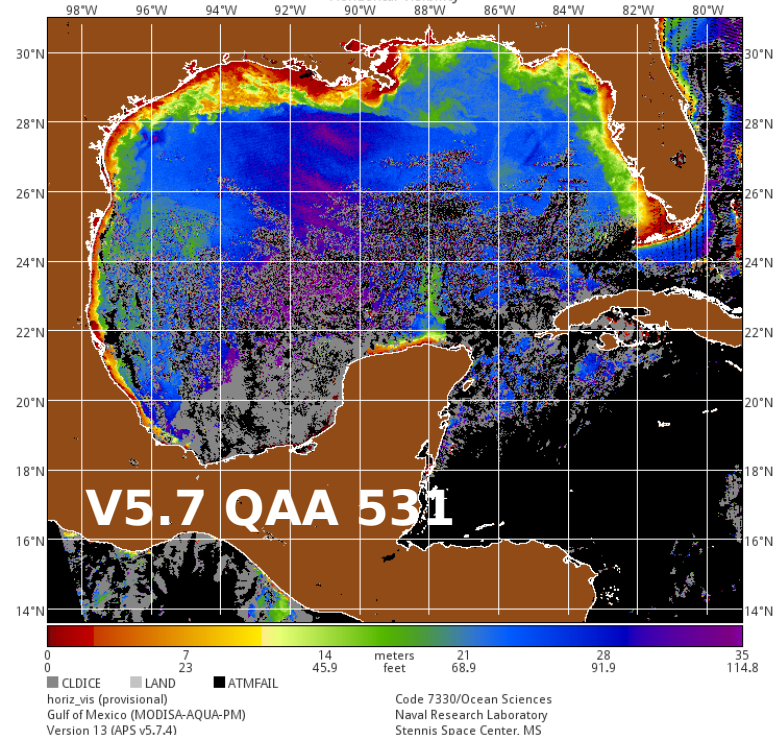


De-striped

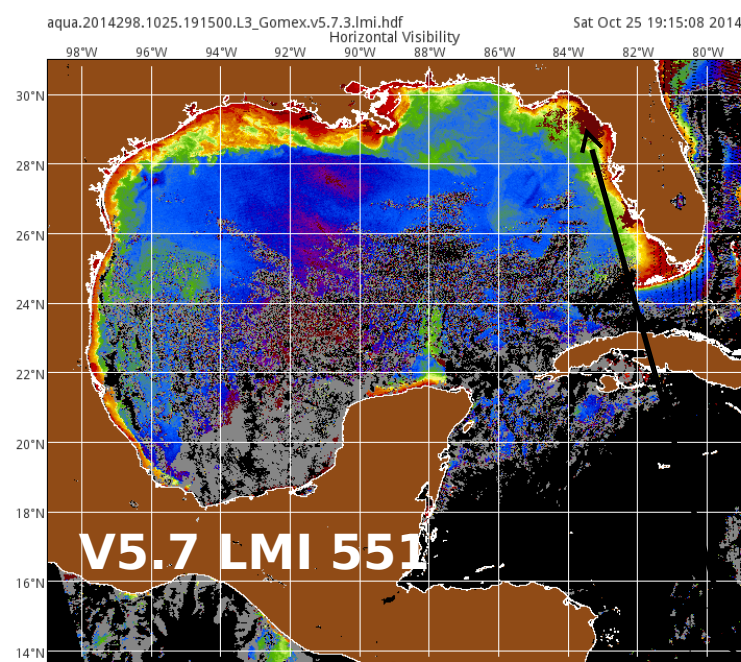


Solid Maroon Values  
are LMI Failures

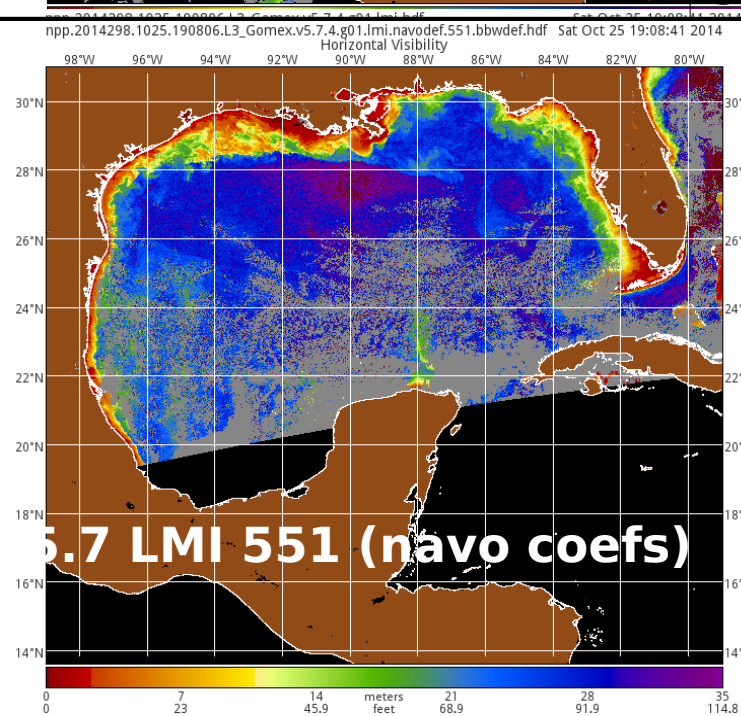
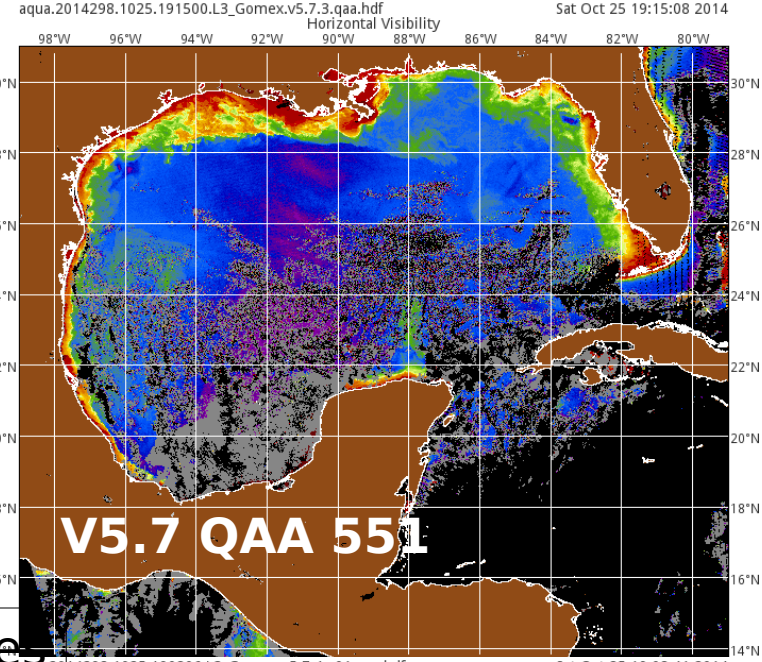
**10/25/14**  
**MODIS**  
**Horizontal**  
**Visibility**



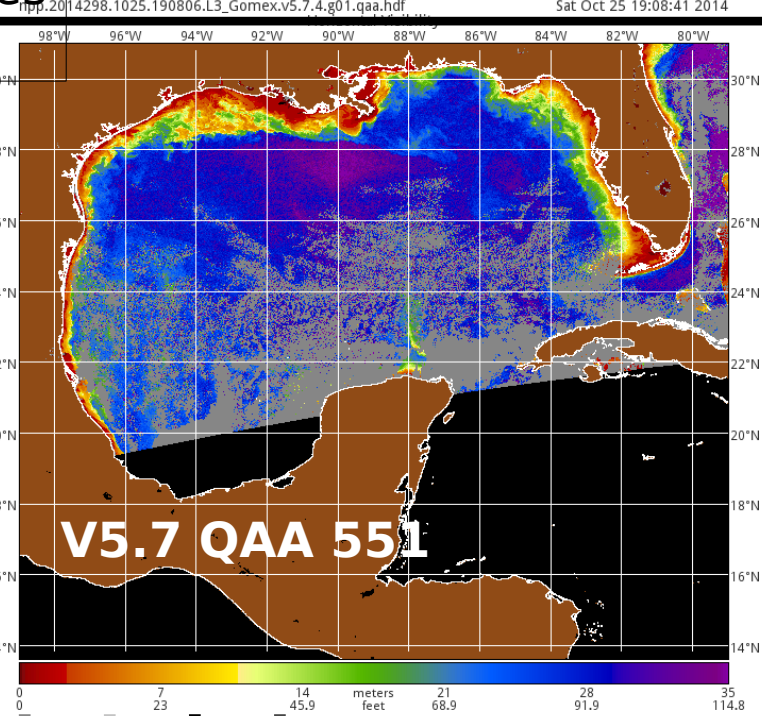




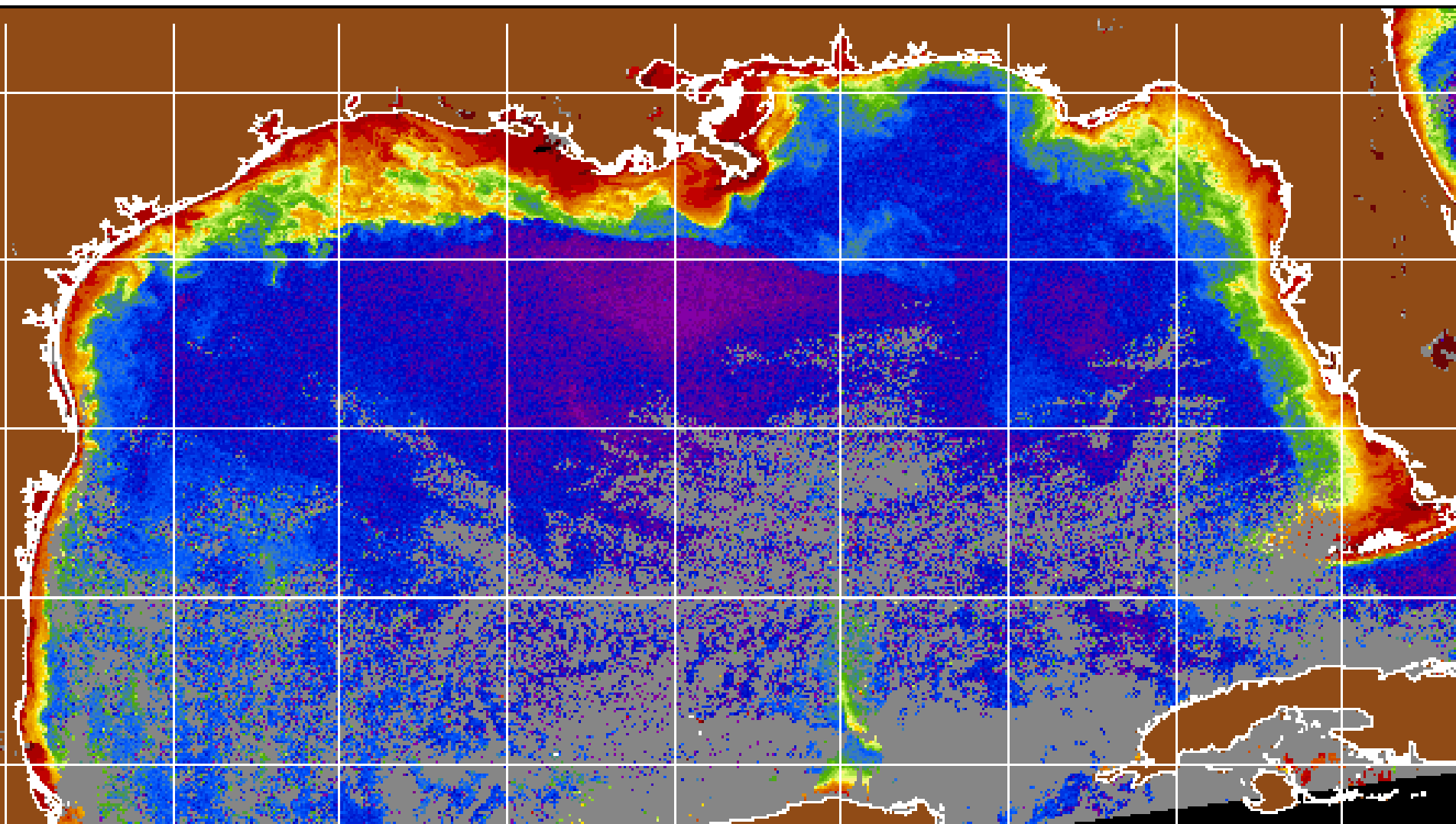
**10/25/14  
MODIS  
Horizontal  
Visibility**



**10/25/14  
VIIRS  
Horizontal  
Visibility**

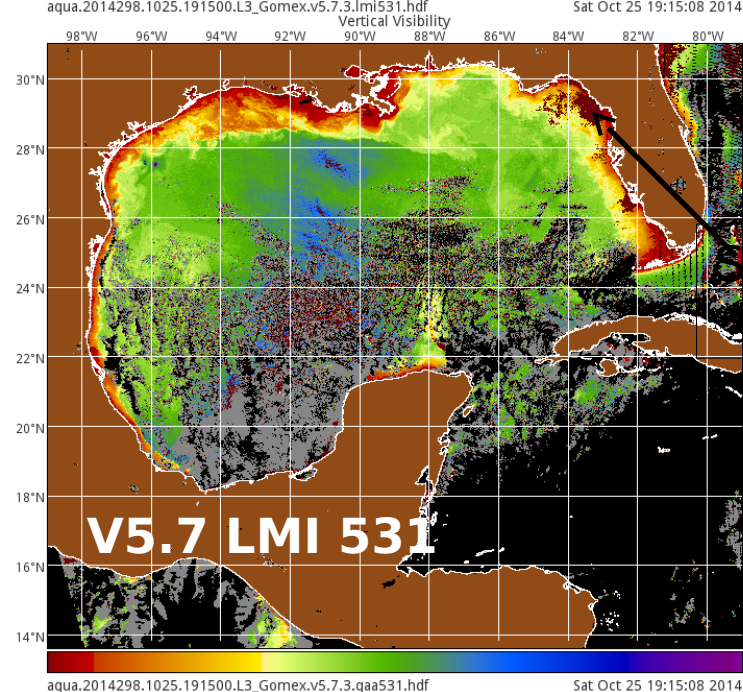


**Solid Maroon Value  
are LMI Failures**



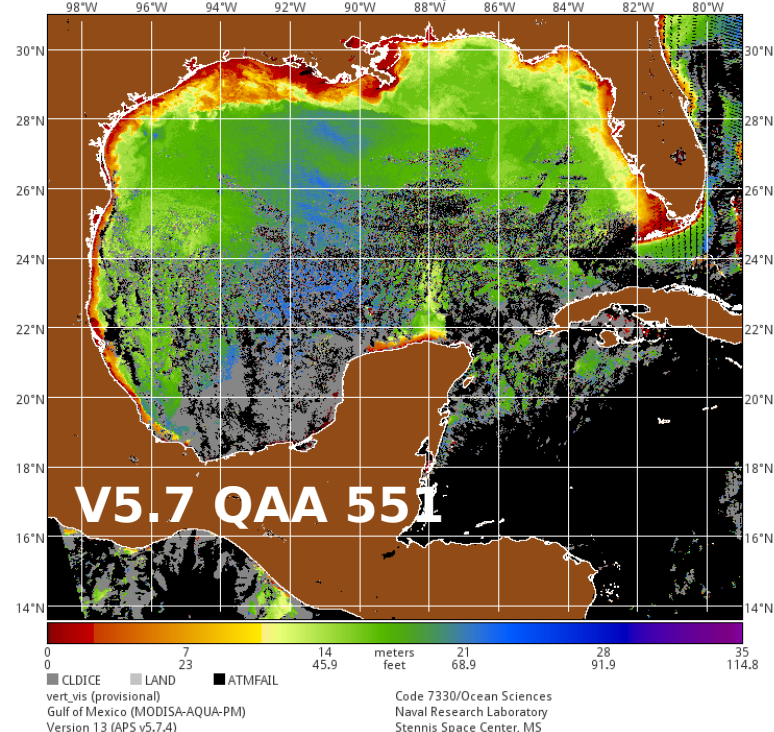
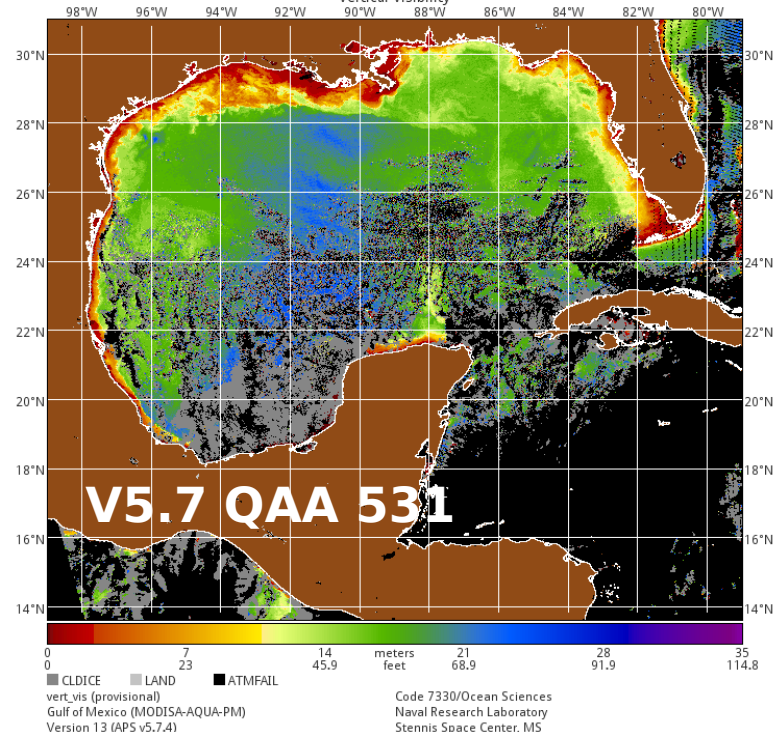
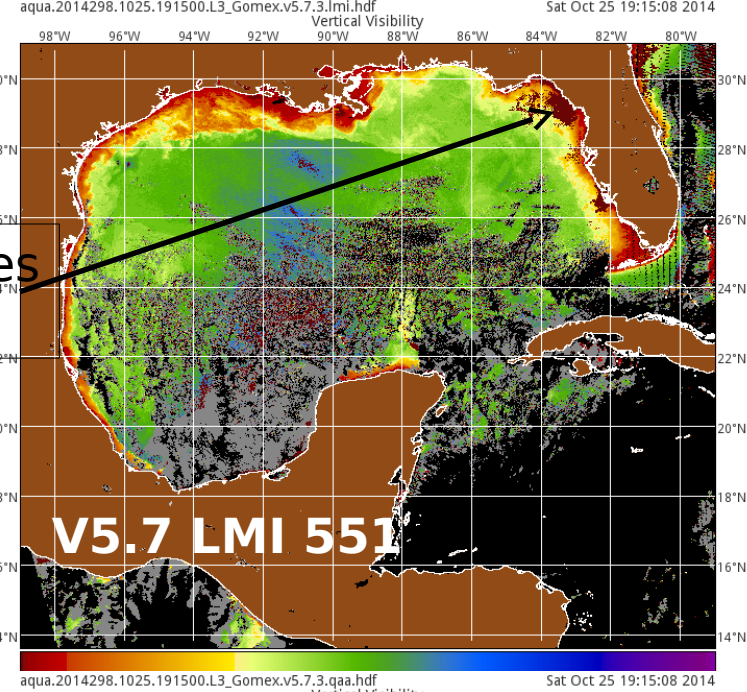
Not much difference! Use slide show and focus on top-left LMI image.  
QAA image will appear when click left mouse button

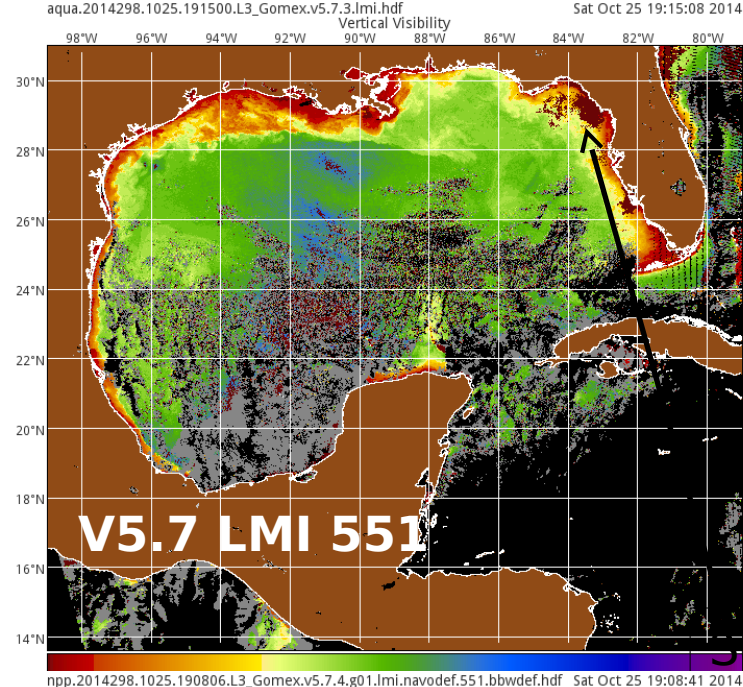




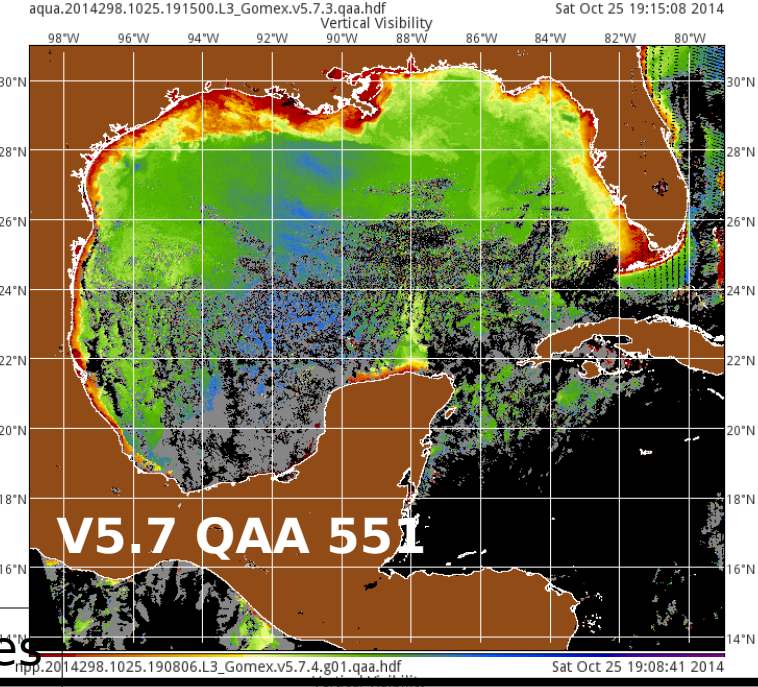
Solid Maroon Values  
are LMI Failures

**10/25/14**  
**MODIS**  
**Vertical**  
**Visibility**

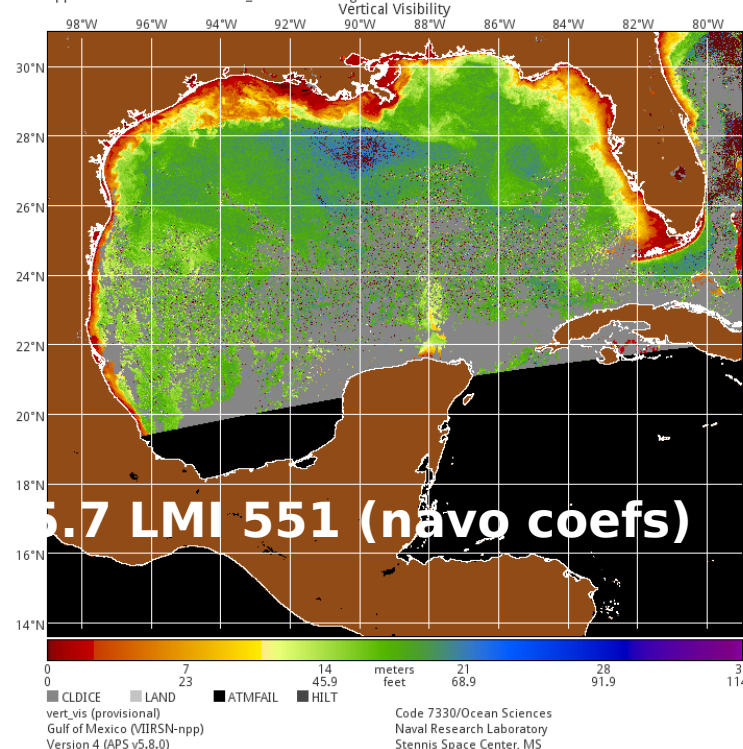




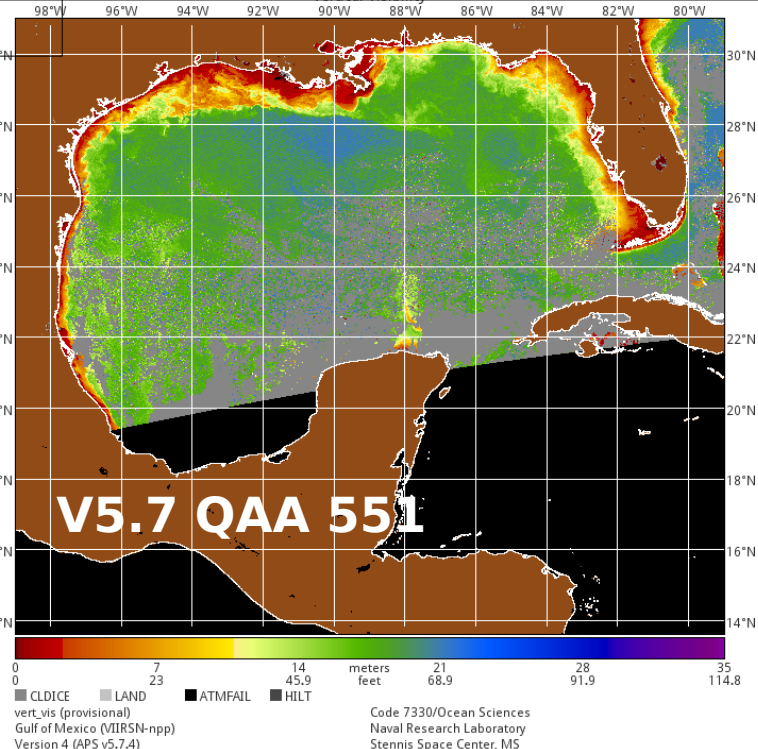
**10/25/14  
MODIS  
Vertical  
Visibility**



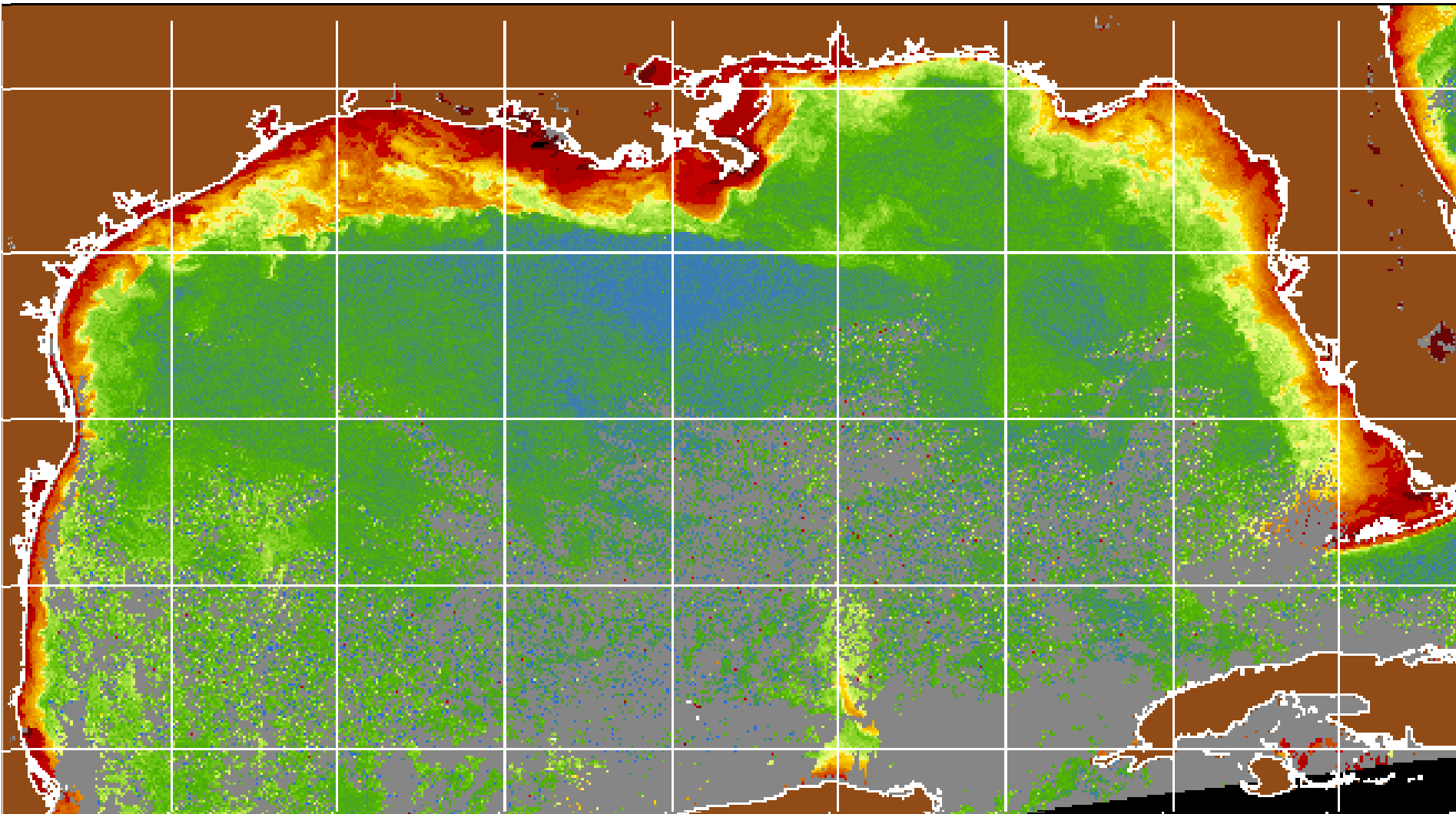
**Solid Maroon Values  
are LMI Failures**



**10/25/14  
VIIRS  
Vertical  
Visibility**

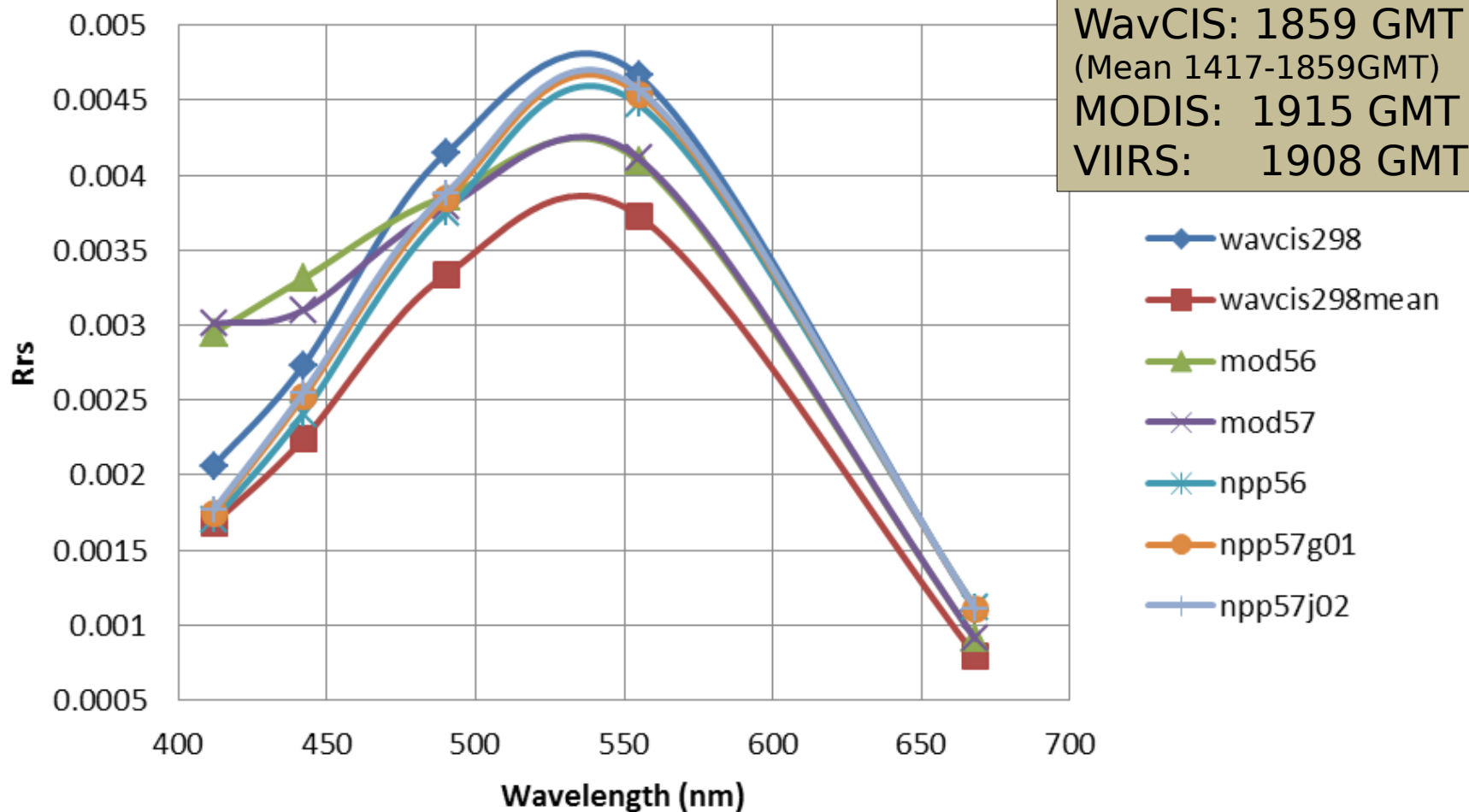




**VIIRS****VIIRS - 10/25/14 - Vert\_Vis (551) QAA****Coefs**

Not much difference! Use slide show and focus on top-left LMI image.  
QAA image will appear when click left mouse button

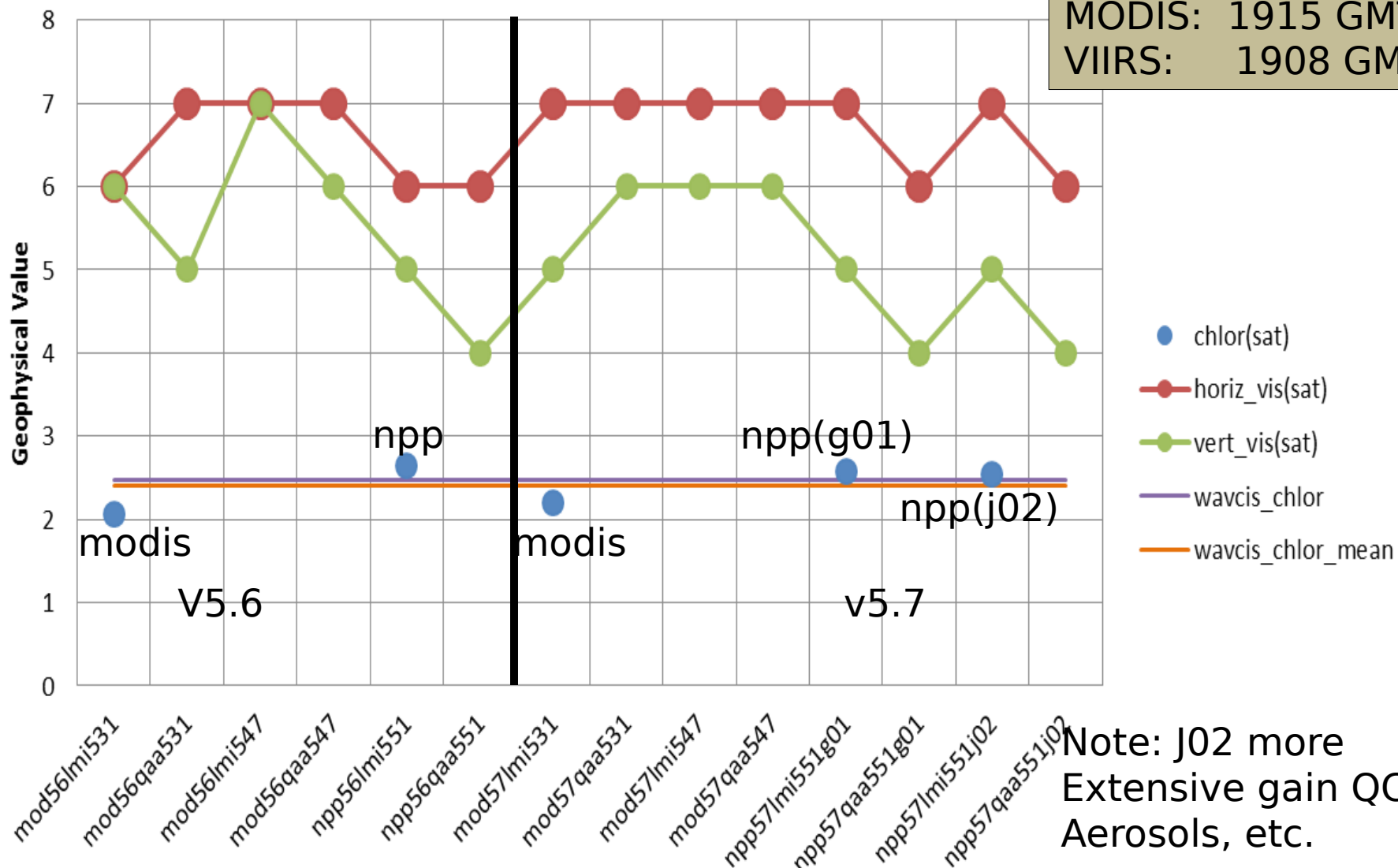
## 10/25/14 (298) WavCis Matchups



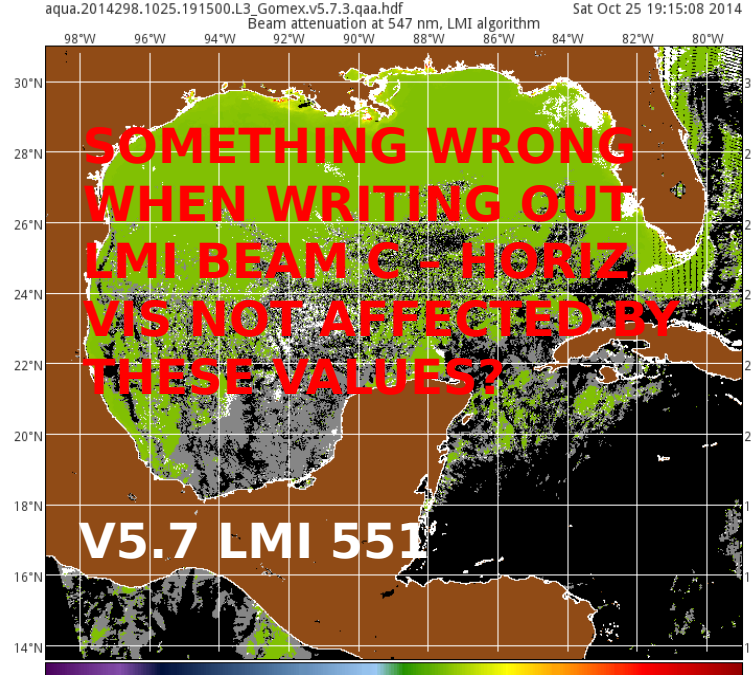


# 10/24/14 (298) WavCIS

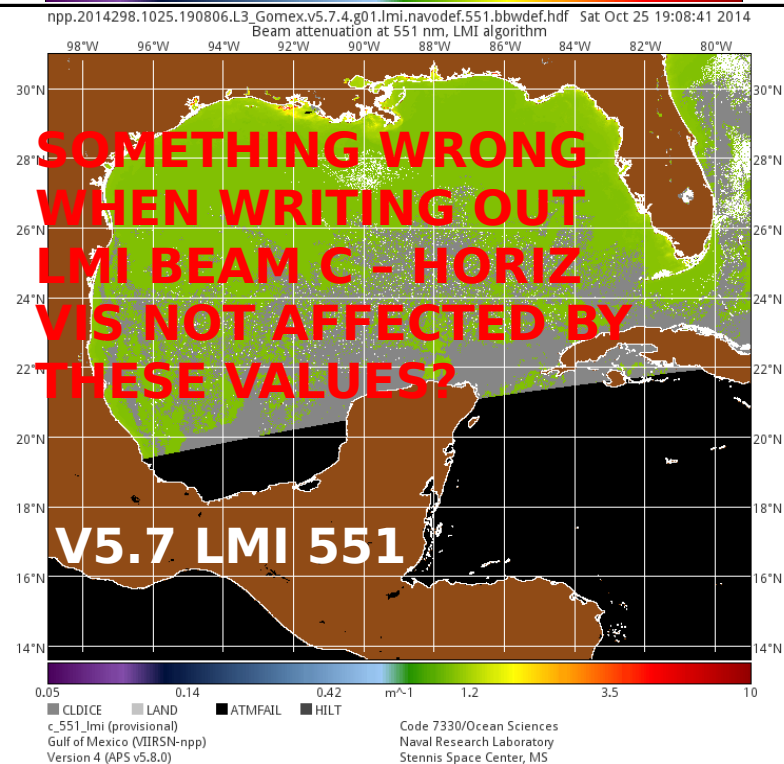
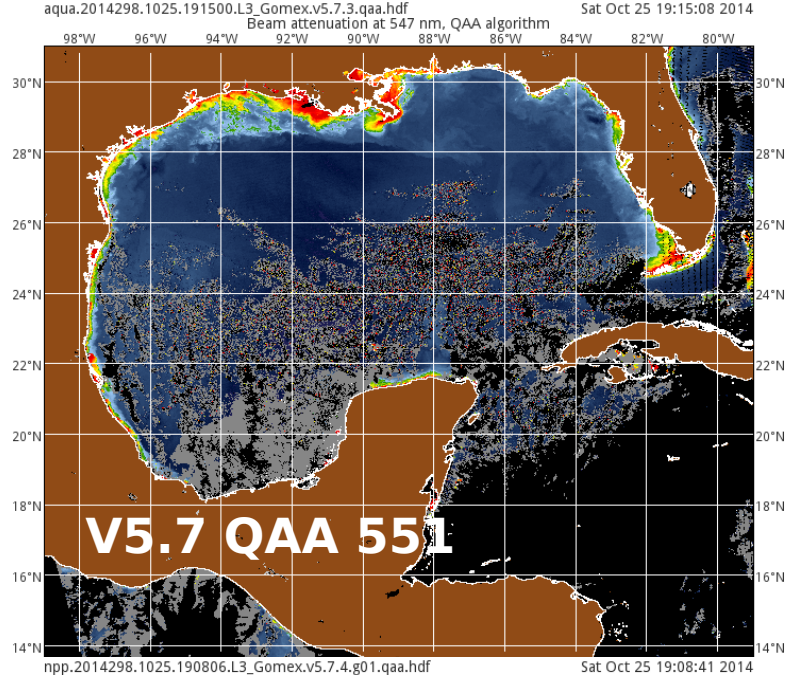
WavCIS: 1859 GMT  
(Mean 1417-1859GMT)  
MODIS: 1915 GMT  
VIIRS: 1908 GMT



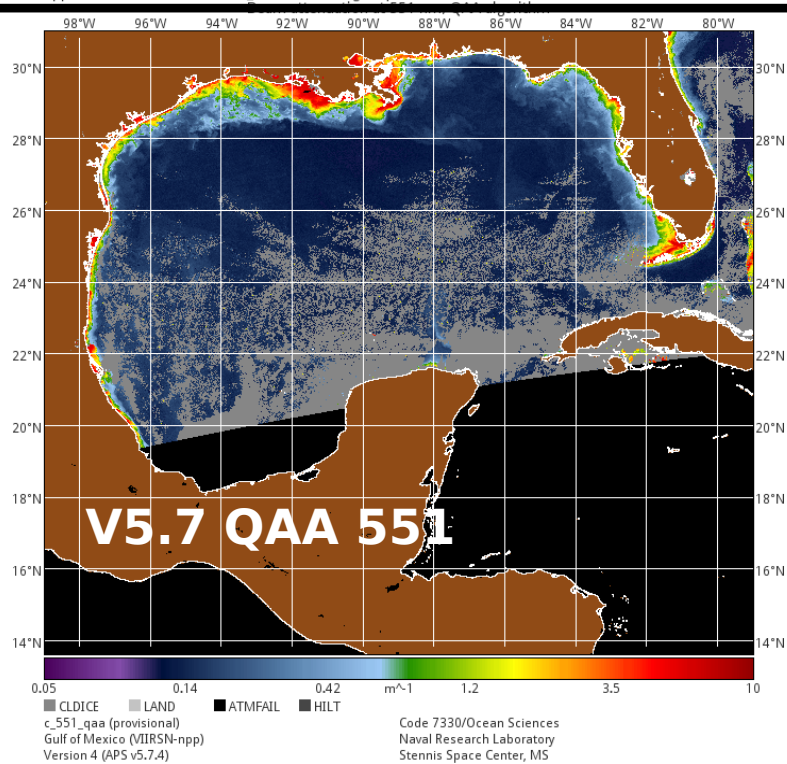
Note: J02 more  
Extensive gain QC  
Aerosols, etc.



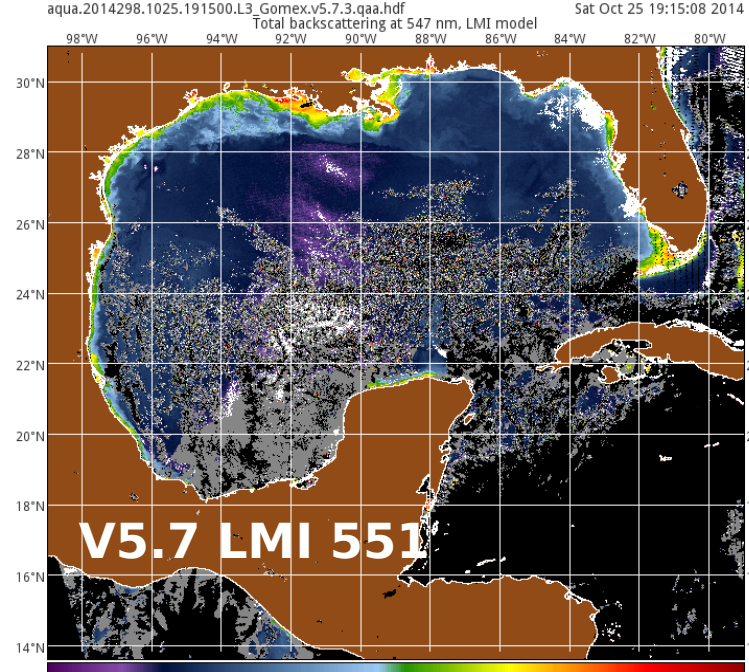
**10/25/14  
MODIS  
Beam  
Attenuation**



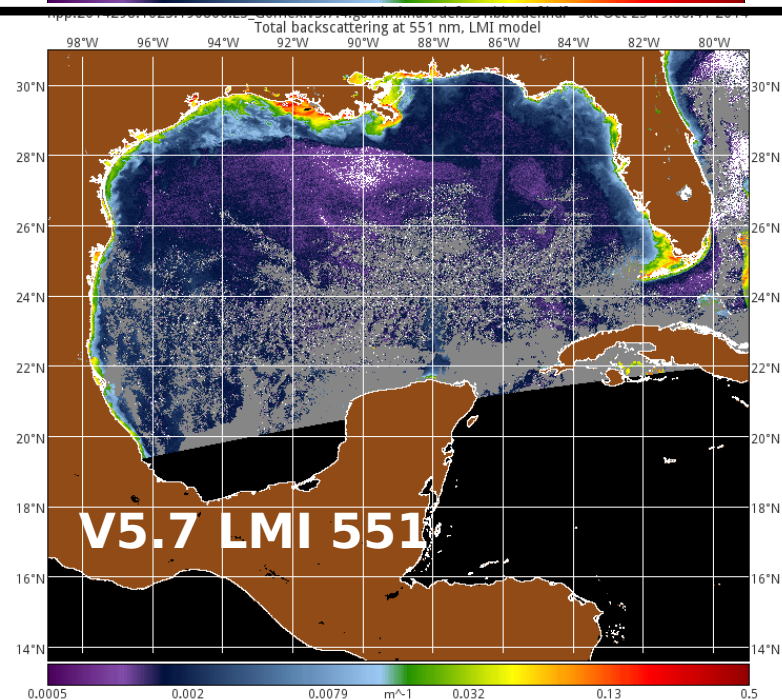
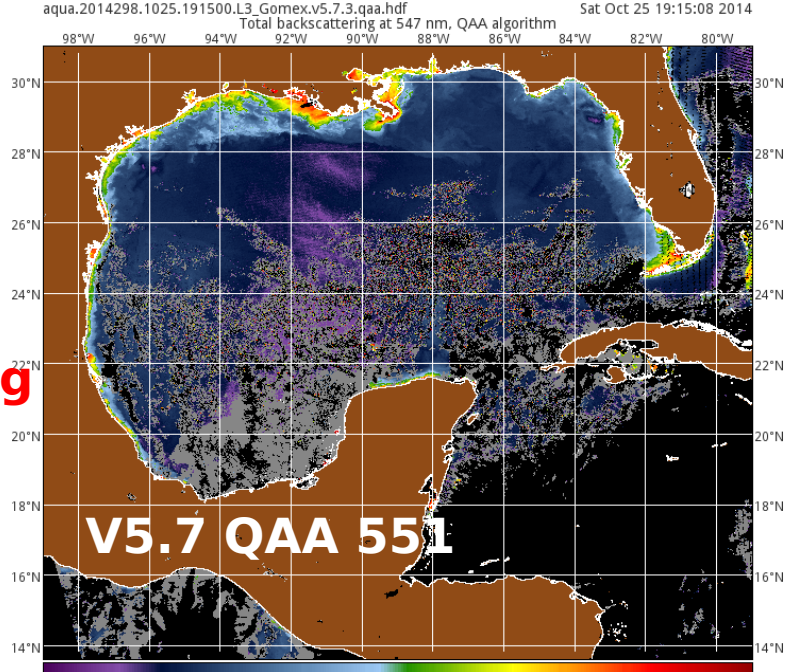
White  
areas are  
LMI  
Failures  
**10/25/14  
VIIRS  
Beam  
Attenuation**



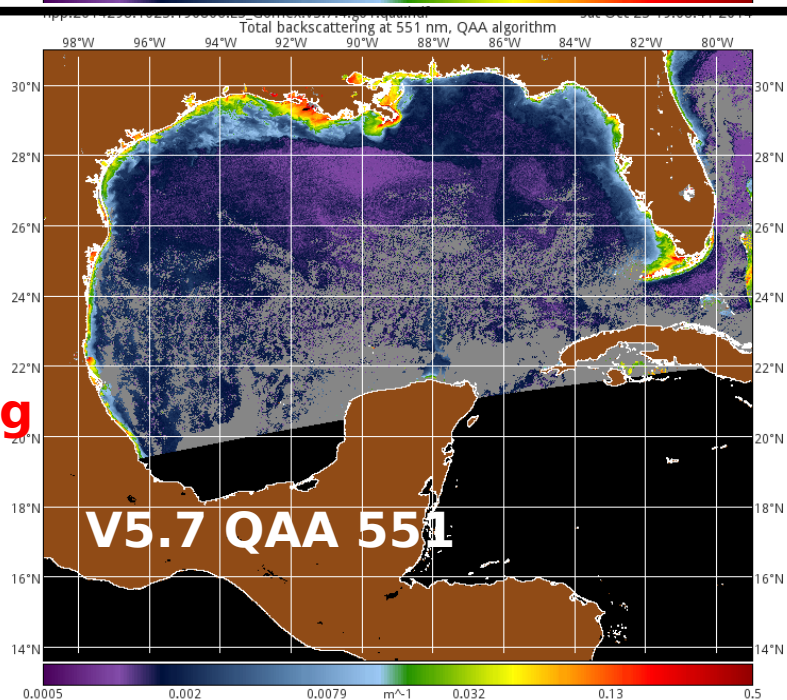


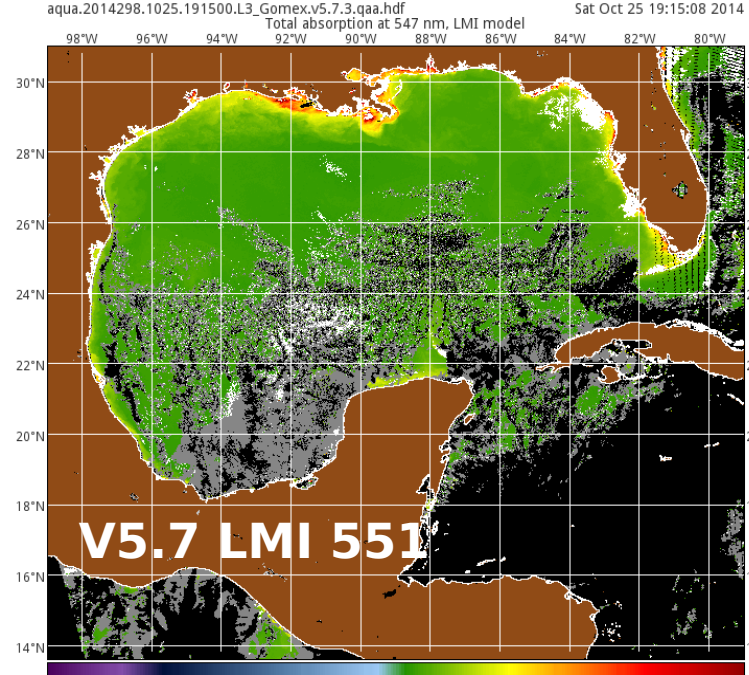


**10/25/14**  
**MODIS**  
**Backscattering**

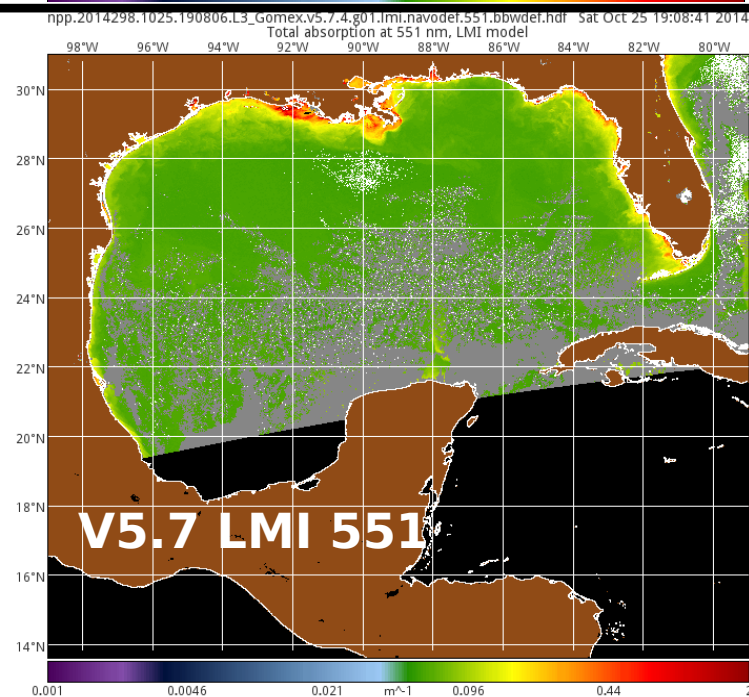
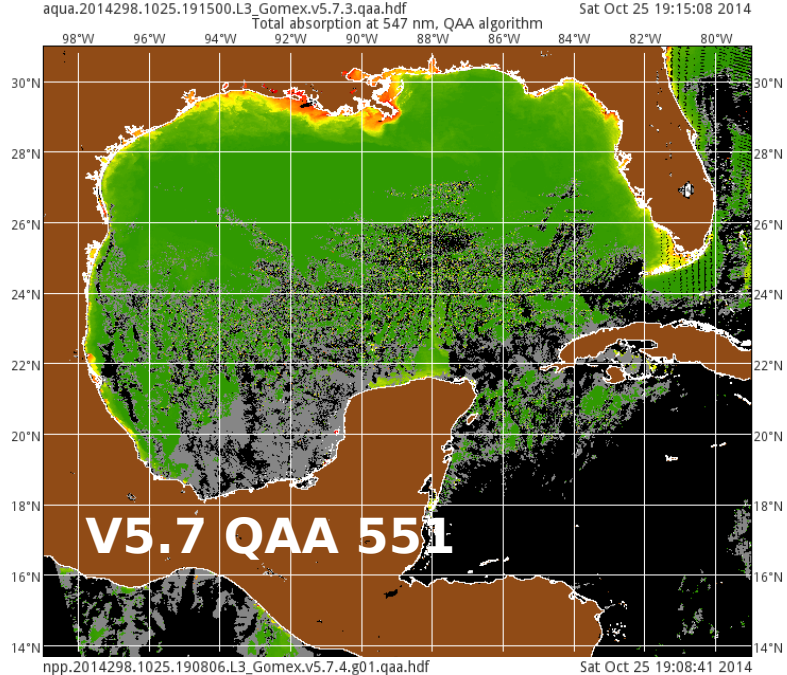


White  
areas are  
LMI  
Failures  
**10/25/14**  
**VIIRS**  
**Backscattering**

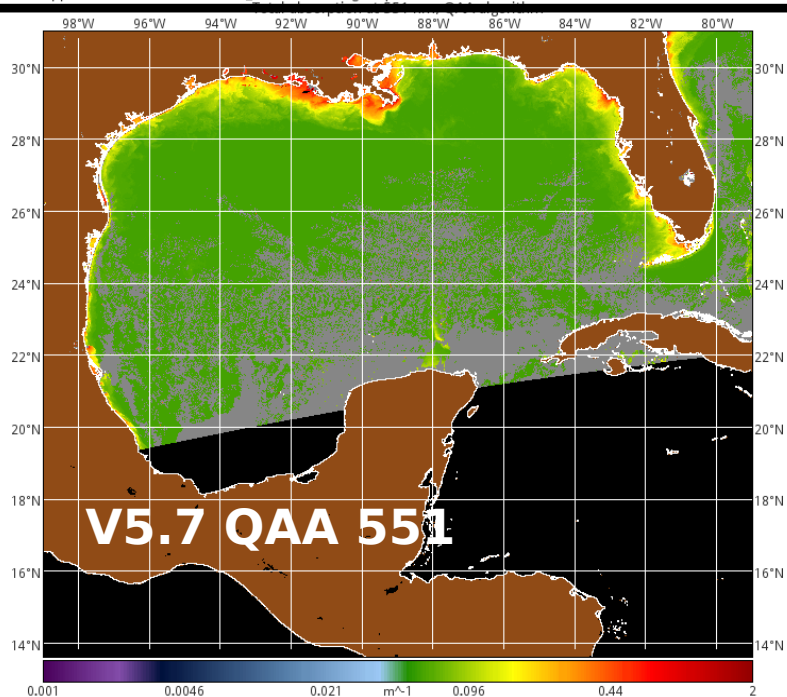




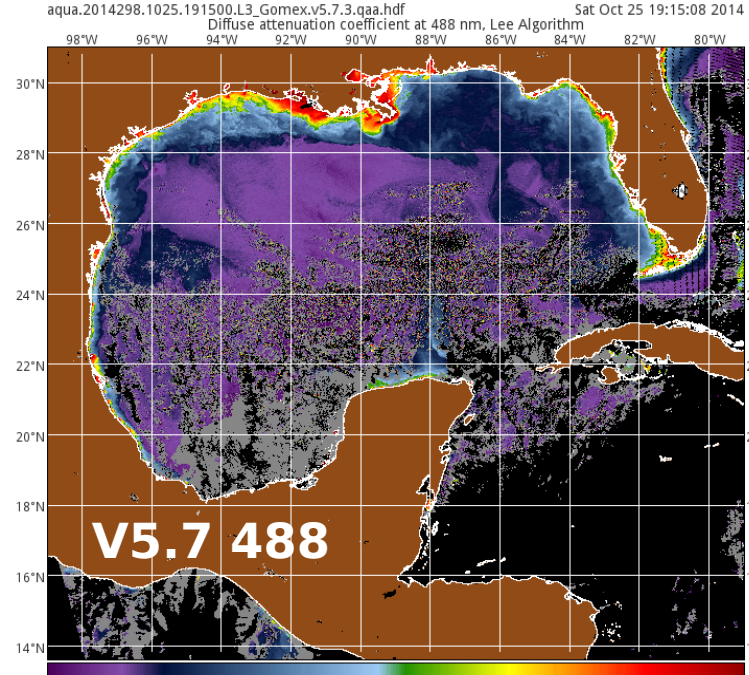
**10/25/14  
MODIS  
Absorption**



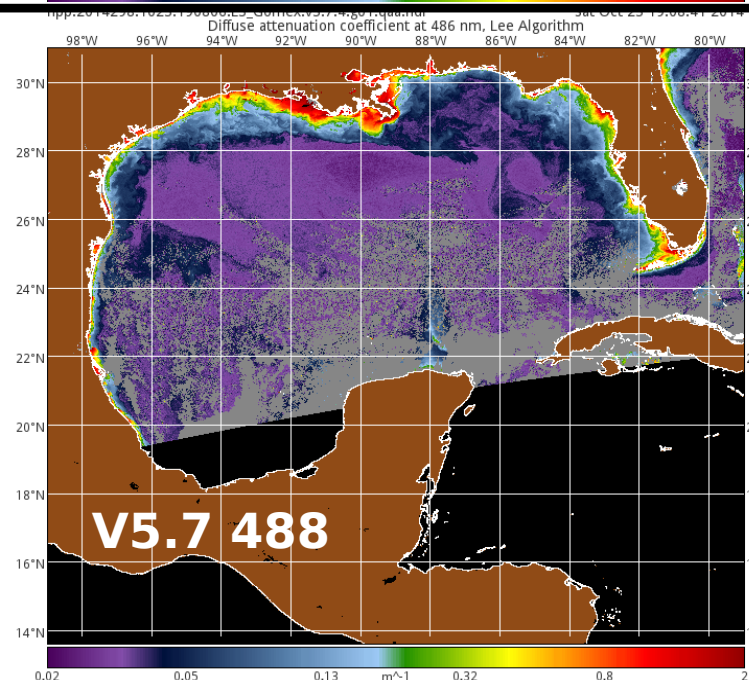
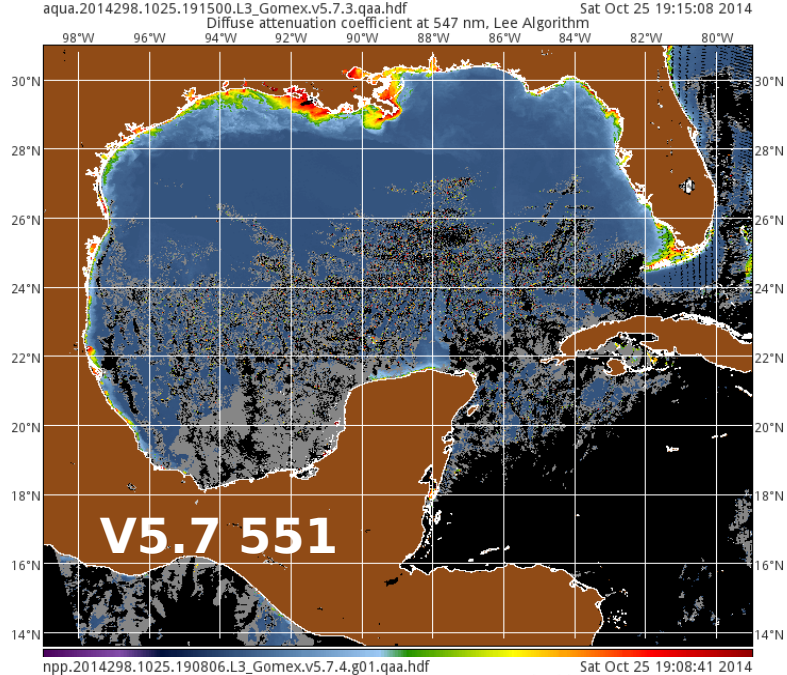
White  
areas are  
LMI  
Failures  
**10/25/14  
VIIRS  
Absorption**



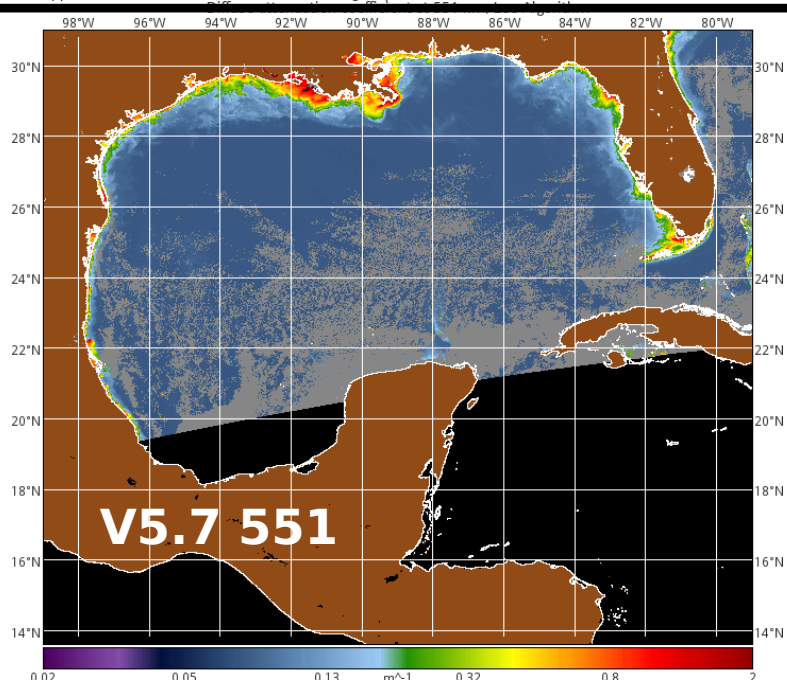




**10/25/14  
MODIS  
Diffuse  
Attenuation  
(Lee)**



**10/25/14  
VIIRS  
Diffuse  
Attenuation  
(Lee)**



■ CLDICE ■ LAND ■ ATMFAIL ■ HILT  
Kd\_486\_lee (provisional)  
Gulf of Mexico (VIIRS-npp)  
Version 4 (APS v5.7.4)  
Kd\_lee derived from QAA10P absorption/backscattering

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Stennis Space Center, MS

■ CLDICE ■ LAND ■ ATMFAIL ■ HILT  
Kd\_551\_lee (provisional)  
Gulf of Mexico (VIIRS-npp)  
Version 4 (APS v5.7.4)  
Kd\_lee derived from QAA10P absorption/backscattering

Code 7330/Ocean Sciences  
Naval Research Laboratory  
Stennis Space Center, MS